

January/February, 1992

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GUIDE TO THE WORLD OF ONLINE SERVICES

MAGAZINE

CONNECTING YOUR BBS TO THE INTERNET

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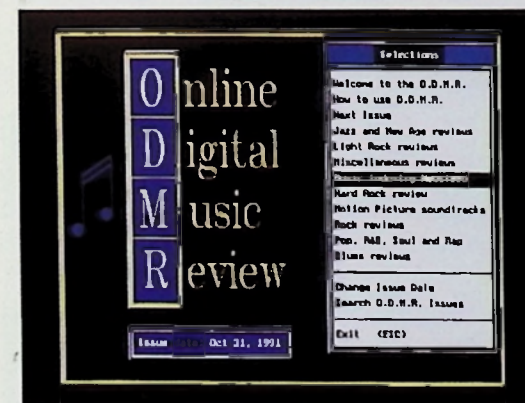
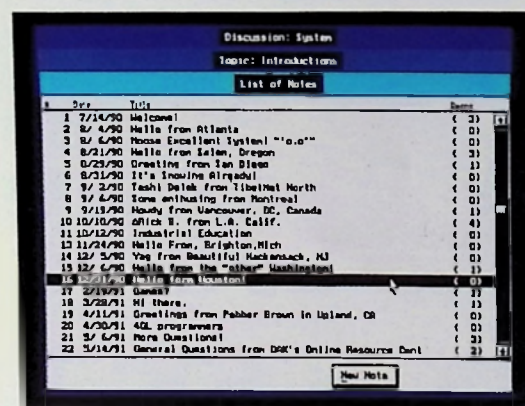
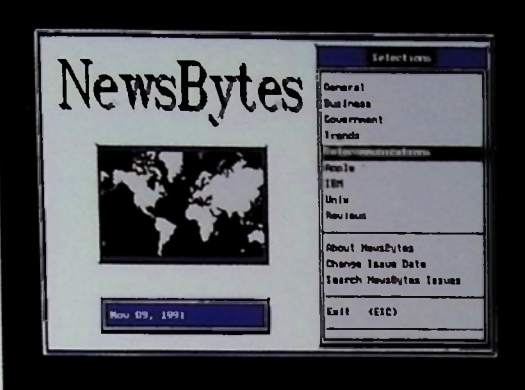
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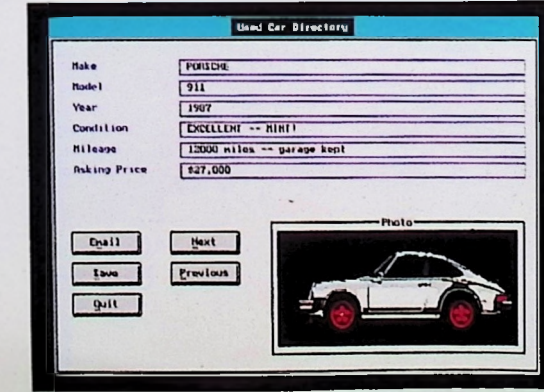
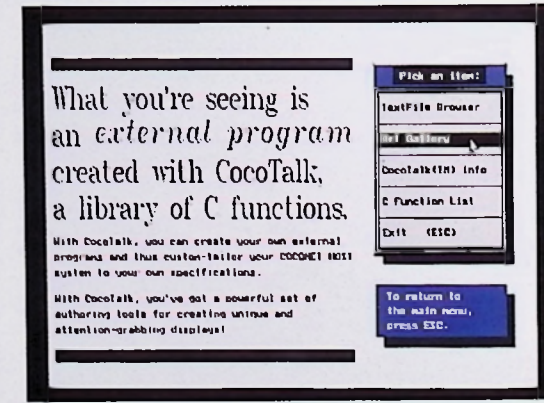
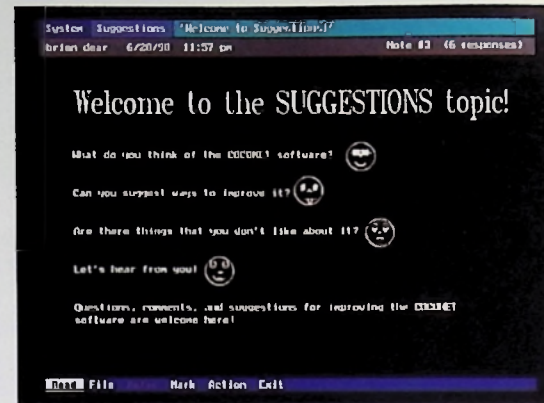
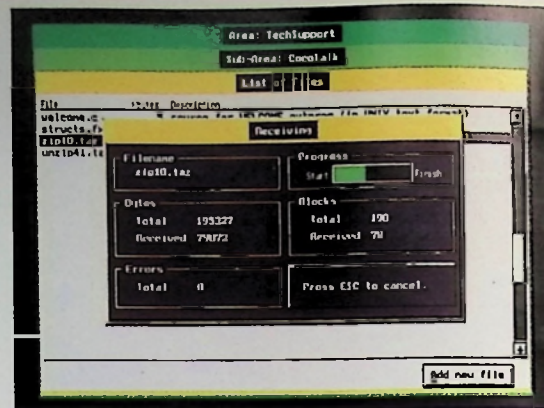
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EDITOR'S NOTES

This issue marks the beginning of the sixth calendar year Boardwatch has been in publication. Despite our own development of a cunning new marketing technique widely known as "stealth marketing" (marketing by declaring your product a secret), we have still grown at an accelerating pace. In October of this year we moved to a suite of offices in Lakewood Colorado, added a couple more full time employees, and are preparing to add a bit of color to the magazine.

One of the problems we've had is making our deadlines. We've been slipping about a day and a half each month for the last two years. As a result, subscribers typically are now receiving Boardwatch toward the end of the calendar month stamped on the cover. We've been discussing ways to get well over this for the last few months. There are several schlockey things we could do, but the most straightforward is to just skip an issue - at least on paper.

Actually, we won't skip anything. This issue is dated January/February. We'll continue as a monthly of course. The March issue should go out right when the February issue normally would - it will just have March stamped on it and so on during each succeeding month. This one-time correction should bring our retail distribution and our subscription service back into line with the calendar. So Boardwatch will suffer a leap month but other than the cover date, nothing will change.

This issue marks the coming out party for two projects we think should prove very interesting. The ONE BBSCON is off to a good start with inquiries pouring in from around the country - we're just now finally getting set up to actually take registrations. We fell in love with a beautiful hotel here in Denver - fabulous food, beautiful meeting rooms, and a fantastic staff. The entire 400 room facility is ours for the three days. It is actually a bit smaller than several other hotels on our short list. I think it will work, and in some respects actually work better than a couple of other larger hotels we had considered. I've secretly

got plans for a Saturday night paper airplane sortee flyoff in the 12 story atrium for example. But we had planned originally for at least a thousand attendees. Given the room available in this facility, and the interest already expressed, it's beginning to look like we will have to limit attendance to about 1100 attendees maximum. Now I know no one has ever put a thousand BBS operators in one facility before anywhere. And I know this should not be a problem. But from the calls we've been receiving before registration even opened, - a word to those with an ear to hear. If it comes up later, Jack did mention that registering early was a good idea.

We've also received a number of requests/suggestions to do a BBS contest. Any way you turn it, this looks like a lot of work to do right. But we've decided to do it anyway. Basically, this first year we do want to keep it as simple as possible. So the **Boardwatch 100 Reader's Choice BBS Contest** will be run as an open popularity contest - a chance for our readers to tell US where the best BBS systems are. Readers can nominate a single BBS of their choice as the best BBS in North America. We'll tally the votes and develop a list of the 100 bulletin board systems receiving the most nominations. To help limit the tradition of ballot box stuffing, we will require a name, mailing address, and telephone number with each ballot and we'll verify them as necessary.

We had looked at several types of equipment prizes for the winning BBSs and finally decided that those likely to win were probably swimming in hardware already. What most BBS operators want more than anything is more callers. So, we will of course publish the list of the Boardwatch 100, probably several times during the following year - and distribute it freely and widely in electronic form as well. Additionally, the operator of the top rated BBS will be our guest at the ONE BBSCON to receive their award - round trip air fair for two, hotel accommodations, and ONE BBSCON registration on us. We'll do a feature story with photograph of their system, and give them a free full page advertisement in Boardwatch for six full months. We'll also do shorter stories on the other top ten finishers and give them each quarter page ads for

three months. Plaques will be awarded to each of the top ten systems. If our readers think they should have more recognition by casting a ballot for them, we intend to give it to them.

And the hardware will go to the voters. Callers would most likely be more attracted to a high speed modem than a BBS operator would. U.S. Robotics probably has the longest history of BBS involvement. Some USR staffers actually set up one of the first Fidonet systems in Illinois and USR invented the sysop discount program - offering BBS operators a 50% discount on their modems as early as 1984. Certainly three quarters of the BBS offering high speed connections today use the U.S. Robotics Courier modem. USR has again stepped forward and offered to help sponsor this contest with two of their top of the line 14,400 bps V.32bis modems. As a result, we'll hold a random drawing of everyone entering a properly completed ballot, and award a USR modem to each of two lucky winners. We may scout around and try to find some other hardware prizes as well as the contest goes along.

The last time we were involved in such a "contest" the administration of the contest was such that we couldn't tell who had won what or why when it was all over. We'll be administering this ourselves this time. There are a couple of elements to such a contest that you should be aware of. The last contest produced a list of 100 bulletin boards from slightly under a thousand total votes cast. If your math is even average, that will tell you that a number of systems made the list with just a handful of votes. While we think we can get a few more votes this time with a concerted effort, what this means is that if a handful of callers get together to make sure their favorite board gets some recognition, it's pretty easily done. It just doesn't take that many votes to swing an election of this nature. And the odds of winning one of the best modems in the industry are pretty good as well.

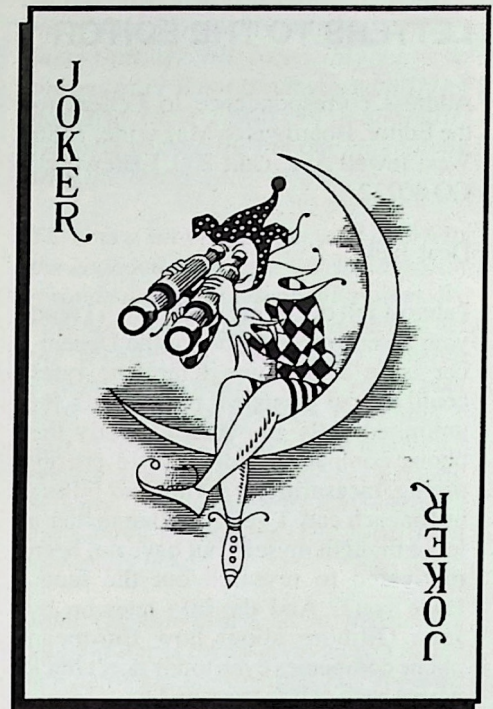
Further, there is always some debate about bulletin boards "campaigning" by asking their callers to vote and making the ballot available for download. As far as I'm concerned, nothing could be more American. You put the time and effort in to make your system a good

one, and it's natural you should want the world to know about it. I'm confident you can't possibly outdo our own professional politicians in the areas of crass and tasteless so don't be shy about asking your callers to put in a ballot on your behalf. If you've done your job with your system, they'll be glad to help out. We do ask that the usual attempts at ballot box stuffing be held to a minimum, but are prepared to validate votes as necessary and discard those suspect. The callers have to download the ballot, fill it out, and mail it in themselves individually.

The contest is limited to bulletin boards, not networks. If your favorite BBS is on CompuServe, GEnie, or Prodigy, vote it that way but be specific. A vote for the IBMBBS Forum on CompuServe counts. A vote for CompuServe itself doesn't. The GEnie Music Round Table works, GEnie itself doesn't. Balloting is open for six months from January 1, 1992, until July 1, 1992.

Boardwatch readers will recall something of an early summer controversy. Boardwatch took some heat and lost a few readers last year basically because we accepted advertising for bulletin boards run by or for the gay community. I was most gratified by the support among our readership for our stand on this issue. We received nearly three hundred letters, cards, and electronic mail messages on this subject - overwhelmingly in favor of tolerance and by and large from those adamantly heterosexual themselves. I found the feedback encouraging in the picture it paints of the makeup of Boardwatch readership. It's hard to tell sometimes who's "out there." At this point I'm going to guess it's a pretty select group of the well read and I personally find that enormously gratifying.

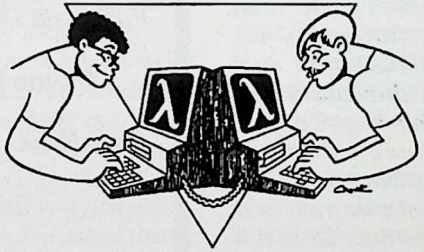
The center of the controversy was an ad for a BBS titled The Back Room. The Back Room is a very successful New York bulletin board catering to gays and lesbians and it was run by Arthur Kohn, a man I always found to be a gentleman and scholar of the highest order regard-



less of his sleeping accommodations - which he routinely failed to consult me on and I had little reason to know a great deal about. Art was actually a dBASE consultant of some repute and had as good a technical grasp of BBSing as anyone running a system. He wrote a dayfile analyzer for TBBS systems that was very widely used within that community and he founded a network of dozens of gay BBSs known as Gaycom. I had met Art originally at a TBBS symposium in 1988 and he visited us here in Denver this past August at the Fido-Con91 BBS convention. He was as always gracious, charming, enthusiastic, and quite New Yorkish, and he neglected to mention his "condition."

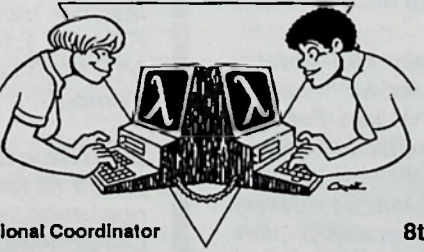
It is then with some melancholy we report that Arthur Kohn passed away peacefully in his sleep this past December 6th - a victim of Acquired Immune Deficiency Syndrome. A lot of things in this world matter a great deal. A lot of others don't. As the years pass and we all grow older, and perhaps wiser, my hope is that we'll get a bit better at telling which is which.

Jack Rickard
Editor



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LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, Boardwatch Magazine, 7586 West Jewell Ave. Unit 200, Lakewood, CO 80232

Dear Jack:

I almost fell out of my chair when I read your assertion on pp. 6-7 of the December issue about how telephone rates could almost disappear (\$20/month for unlimited calls anywhere) if only the phone companies didn't waste energy timing, measuring, tracking and billing us for each call. I've given that matter a lot of thought myself, but have not been motivated to research out the facts. Have you?? And the info later on by John Gilmore about how European phone companies even today don't track where each call is from and to.

Please give us more information. More sources. More truth about this whole thing.

Here in New York I try and listen to the telephone show on WBAI radio every Wednesday night from 9-10 PM. OK, so I'm usually so tied up that I forget to listen. But do they have info about this? Aside from being able to make my teenager feel guilty about the number of long distance calls to his girlfriend, who wouldn't trade call-by-call data for cheaper service?

Seriously, this could be the biggest change in America since the Revolution. Computers are neat, but no one knows how to use them. Everyone uses the phone and cheap service would really open up this country.

Sincerely,
Steven J. Weinberg, Director
Community Action Services
East Brunswick, NJ

Dear Steven:

Part of dealing with the issues of telephone companies, our universal telephone network, and the future is to develop LESS sources of information and misinformation and less research and "facts". As any PUC official will tell you, the fallacy in public regulation of corporations such as the telcos is that they have unlimited staff and unlimited

resources to deliver truck loads of paper for you to "evaluate" whenever you try to force an issue not in their favor. PUCs conversely have limited staff and resources to respond with. There is no shortage of data. There is a complete dearth of "information".

My assertion is admittedly based on stepping BACK from all this cloud of telco generated statistical line noise and looking at the overall picture a bit. In 1984 ATT agreed to divest itself of local telephone monopoly operations in return for the privilege of competing in computer services. At this point, we split our telephone system into two entities: local regulated monopolies and competitive long distance services. This has resulted in a live national classroom laboratory class in competition vs. regulated "natural" monopoly economics.

In the period since, long distance rates have gone down by over 40%. Why? Labor for one thing. Over 100,000 employees have been shed from the ATT monolith in this period. Office automation and a more technologically advanced network allowed them to perform not at the same level of performance, but in my estimation a greater level of performance over a period when actually calling volumes more than DOUBLED - with a fraction of the employees. Switching equipment over this period advanced dramatically in capability while falling in price. And network costs have dropped phenomenally. MCI estimates a circuit mile of fiber dropped in cost from over a \$1000 to slightly less than \$8 in this period. In short, the technology got better and cheaper, and the costs of labor declined to a fraction of what it was. Somehow in the process, the service I get and the people I deal with in these companies is better and much friendlier than it ever was under the old Bell system - markedly so. Competition and some fortuitous technological advances drove this improvement.

In the same period, the cost of local monopoly telephone service went UP while demand for new lines flattened out. Why? The same office automation savings were gained, they use virtually identical technology, and yet at every turn they seem to be demanding more money for less service. Most of them desperately want to be long distance

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ervices charging metered rates for local service and EVERY new product they introduce tries to wedge in some type of meter. In not a few, but NUMEROUS cases in the past two years, they've actually been fined by local PUCs for exceeding the "rate of return on investment" allowed under the regulated monopoly formulas - in some cases by hundreds of millions of dollars - all while screaming they were being robbed by regulatory authorities. In response, they quietly but powerfully lobbied to be released from rate of return restrictions, and last year the FCC they appear to have bought and paid for mandated that rate of return be retired as a regulatory tool.

Finally, we do know that over 40% of the costs we pay to long distance carriers actually goes BACK to local RBOC in the form of access fees - payments from the long distance carriers to local RBOC for the right to connect calls into the local loop. If you factor out the cost of simply measuring, billing, mailing bills, and collecting bills from the remaining 60%, I think we can make a strong case for telephone service in a market of 110 million U.S. lines to be too cheap to meter for long distance.

In the category of minor sins in the local loop, implementation of technology we need to compete as a nation has consistently been held hostage to demands for access into markets, such as information services, that these companies have demonstrated repeatedly that they couldn't make a buck at if you just gave them the banking system and asked them to just sort through, pick out what they'd like to keep, and leave the American public whatever was left over. But the part that really has me up a wall is that they use rate payer money to campaign politically via local radio ads against congressmen who dare cross them, and spend over \$25 million annually lobbying our congressmen to get legislation basically assuring them of a captive American citizenry as a holy cash cow. Through some creative accounting they insist these activities are actually funded by stockholders rather than rate payers. All stock holders who mailed in a check, please raise your hand.

The pathetic thing about all of this is not that we pay a few bucks more for local telephone service or that we have to wait

for ten-year-old ISDN technology to actually be available. It is a fundamental lack of vision on the part of the leaders of this industry. There are hat fulls of money sitting there waiting for someone to go out and start wiring up new services and new communications media and the government isn't any of what's holding it back. The entire approach is to simply milk existing customers for more money on less service in a childish "give me more" chant. Our corporations are dying under their own bureaucratic weight and a simple minded lack of courage and vision on the part of the adult men in suits who run these institutions. It isn't inflation. It isn't high interest rates. It isn't government interference. It isn't the deficit. There's no war to blame it on. Even the "evil empire" has turned out to be "just plain folks." Yet we are shedding HUNDREDS OF THOUSANDS OF CORPORATE JOBS at IBM, AT&T, General Motors, McDonnell Aircraft, and dozens of other large corporations as they go through their death throes. I don't really mind watching them die, but I hate to see all the good people who get an incredible shafting in the process and are financially distressed or ruined in passing. Anything I say about telephone companies results in vehement denials from their public relations offices and equally vehement confirmation from their own employees, our subscribers, who are thoroughly demoralized within these companies.

Finally the concept of local and long distance calls is grossly misunderstood. It costs no more or less to switch a call to a local pizzeria than it does to call across country. In fact, depending on loading, a local telephone call may be routed through three states on the way to the pizza joint across the street if that's what it takes to get it there. All rate issues boil down to economic smoke and mirrors based on how we charge for service so that the costs are equitably distributed and no one pays "more than their fair share". Behind this ludicrous "fairness" doctrine lies an organization who's aim is not fairness but revenues and an insatiable appetite for same. By pointing a finger at individual users and claiming their service is somehow being subsidized by YOU, they can play one subscriber against another and keep the ball in the air. There is a mythical grandmother in all this that can't afford

more than \$4 monthly for telephone service that we all ostensibly have to protect but I'll not insult you with THAT pathetic little chant. In realityville, Gram is getting the big one right along with the rest of us.

There is a single solution, and it forfeits the economies of scale we do have with a single universal telephone system. We may not get lower prices but we will get the technology we need to develop economically when we let every man with a 64 Chevrolet wire truck and a pair of rusty pliers offer local telephone service and connect it into the existing network. All the reasons why we can't are simply fraudulent. The local loop monopoly must go.

John Gilmore's article on privacy? I thought it was pretty good when I heard him deliver at the Computers, Freedom, and Privacy conference last spring and I thought it was good in written form as well - so with his permission, we published it. The point he made was that Nazi Germany used existing telephone records to determine who was a good guy and who deserved a little gas. His point was that innocuous records today can be terribly damaging if the political scenery changes - and we have little control as individuals over whether or when it might. But I almost fell out of MY chair this past week on learning that several of our local RBOC are now out peddling mailing lists to companies based on our own specific private calling patterns to businesses. Caller ID or no, this could lead to a situation where if you call one Florist, you'll hear from em all! I can't believe this is going on with virtually no comment at all.

Jack Rickard

Dear Jack:

I decided to renew the subscription now so that I do not miss a single issue. Your magazine is the only one that I read cover-to-cover and enjoy every word. Your writing style is incredibly unique. I hope you do not come up with a crazy idea and attempt to change it.

Am very glad you finally included a picture of the whole family - the suspense was becoming unbearable. Your comments about the 4th arrival and

the boys was an absolute delight to read; I am surprised you are still alive - that the wife hasn't shot you on the spot.

There is no other way to say it - your writing style is delightful. Keep up the superb job.

On the serious side, I teach a class on Computer Networks for U.C. Berkeley extension and IEEE as a side hobby. Have accumulated all the material, the terse "crib notes" are done and I got 2 publishers who are bugging me as to when the book manuscript will be ready. Have no problem lecturing and have recorded all my lectures for the past 4 years but when I sit down to put things on paper I am a disaster. That should give you an idea why I am so very jealous of your natural gift. Your words on paper simply flow one after the other without any visible effort.

Take care and give my regards to all the family. Let's see what is in store in 1992.

John Gulbenkian
Walnut Creek, California.

Dear John:

Thanks for the kind words regarding Boardwatch and the "writing style." The nature of things being what they are, about as many detest it as enjoy it, which is why most publications seek a neutral and faceless format more broadly appealing to everyone. Boardwatch is an experiment in the other direction - under the theory that it is preferable to aggravate readers than to be ignored by them.

The family is fine and as you point out, I am still alive - the wife has so far passed on the option to embellish my carcass with a bullet. I suppose the realization that she could do so at any time knowing there's not a grand jury in the country that would indict her for it makes her generous in spirit - for the present. But yeah, I'm probably living on borrowed time.

As to your writing project - transcribe your lectures and sit down and intentionally delete 30% of the words. Then read it out loud (that's with your voice set to ON by the way) and make corrections where it doesn't "sound" right. All the advice about using one simple word

in place of another more complex one is malarkey brought on by academic overdose. Every word has at least one meaning and each and every word in all languages is entirely unique. There are no two words in ANY language that mean precisely the same thing. Additionally, most academics write to please the sight and to make it look like other writing they "see" every day. Write for the SOUND of it, and don't worry about what it "looks" like. Finally, while the result may appear effortless, you will find every word and every syllable carries its price. Pay it. Pay it and the world is one good book better for it. Try to find the "effortless" route, and you're just slaying trees.

Jack Rickard

Dear Jack:

The article in your December, 1991 issue regarding the Federal Court recognizing Sysop rights in the CompuServe case is extremely misleading. The article gives one the belief that it is now clearly the law throughout the land that Sysops are not responsible for libelous statements made by others in a public area of an on-line system.

Although the Judge's decision is favorable to Sysops, this was a trial judge's decision only. As such this particular judge's opinion has no value as a precedent in any other trial judge's courtroom even in the same district, let alone in any other district of the federal courts.

Even if the matter were taken to the Circuit Court of Appeals in the district in which the trial judge made a ruling, and affirmed, the ruling would only affect federal trial courts in the same district. This would leave New York state judges and the judges of every other court of the land (even federal courts) free to rule to the contrary.

Only the United States Supreme Court's decisions can and do set national precedents.

Accordingly, even though we can take encouragement from the decision described in Mr. Rose's column, this one trial court decision is a far cry from

universal assurance of no liability on this issue. Your readers should be totally and correctly informed on this topic.

Sincerely,

Paul Bernstein, Attorney at Law
Sysop, LAW MUG BBS (312)661-1740

Dear Paul:

You're right. They should be totally and correctly informed on this topic. Unfortunately, there is no one in the country capable of totally and correctly informing them. Bulletin boards and online services are indistinctly perceived by our legal system and rightly so, as they are still in development in some sense. There are very few cases of any clarity regarding electronic online services to point to.

However, it is important that the test cases that form the developing body of law be test cases, rather than test casualties. It is further very important that the freedoms and rights assured print publishers, print distributors, and print readers not be forfeited by viewing the electronic world as "exceptional" to our Constitutional rights. The Cubby vs. CompuServe ruling by Judge Leisure is crucial in a historical sense in that it is the first time a court has compared an online service to a print media distributor, and acknowledged the limited practical control they have over content - and so limited the legal liability. As such it is of immense historical value and far from being the worthless trivial occurrence you describe, will undoubtedly be referred to and cited on numerous occasions over the next few years.

That the decision is not binding on other courts is hardly news. In a developing area of law such as this, all precedents, formal or not, loom large in importance. At the same time, all are much more subject to being ignored or declared irrelevant than is the case in more mature areas of the law as well. Even our public expectation of what "ought" to be with regards to online law will have an enormous impact on the final form those laws do take. Despite the hierarchy of courts you detail with such energy, I can't believe a similar case will be heard without some discussion of Cubby vs. CompuServe. It does establish a concept

in our social consciousness of online service as a distributor of limited liability. Whether that concept takes hold firmly in our legal system is much more important than the rank of this court in the pecking order of courtidom.

I do agree that it hardly qualifies as universal assurance of no liability on this issue. I don't actually hold out much hope for universal assurance of anything in this area within my lifetime. But I did find the ruling encouraging, probably historic, and I don't think Mr. Rose's article was in any way misleading.

Jack Rickard

Dear Jack:

You may be familiar with the situation in the (ex) Yugoslavia. To make it short, nothing works any more as it should. The telephone network is overloaded, mail is being delivered unregularly, and in the central part (Croatia) people are dying every day in dozens. With the independence of Slovenia, declared a month ago, things may go better here in the north-west (Slovenia), especially when the international community is going to recognize its independence.

Concerning my question about the on-line service, I've eventually got through and I like your BBS. I understand that there is a special service, which permits posting the BoardWatch Magazine to some BBS. As I operate a quite successful five-line BBS since April 1, I would like to subscribe to this possibility.

I read the article on BBSs of Mexico in the September issue. Would you be interested in publishing a similar article on the BBSs of (ex) Yugoslavia? I would be happy to do it.

And last not least, your article "How to make money with a BBS" was really great. We have immediately applied your "two simple techniques"; the first one, "print follow-up" is having excellent response (combined with increasing the number of lines from two to five), while the second, "on-line subscription" works more as an image of our BBS, as not many BBS users have their own card.

Kindest Regards

Boris Horvat, ABM-BBS - 38 61 218-663

Boris:

Somewhat. We have read news reports about the fighting there. Pleased to hear from Yugoslavia or I suppose Slovenia more properly now where you are. I didn't realize bulletin boards were going to multiline systems so quickly in your area. It's interesting to learn that the elements discussed in "How to make money with your BBS" hold true in Slovenia as well and that such activity is possible under such conditions. It would be very nice if you could join us here in Denver this August to share your experiences with us in person at the ONE BBSCON.

I would most certainly be interested in publishing a list of BBS from Yugoslavia or Slovenia and an accompanying article. An accompanying photo would be a nice touch.

I do hope your neighborhood finds peace and a return to normalcy in the coming months.

Jack Rickard

TELEBITS

MOTOROLA INTROS SMALLER PACKET MODEM AND SOFTWARE

Motorola Inc. is introducing a new version of their packet radio/modem combination. Termed the **RPM405i**, the new model is 25% smaller and lighter than their previous models. The device, which allows radio data communications over the national **ARDIS** network, is primarily aimed at original equipment manufacturers. One of the prospective users is Poqet Computers, maker of a very small palmtop computer. The Poqet radio computer package is expected to be available in late February.

Motorola has also released a **\$159** software package titled **Waveguide**. Waveguide communicates with the **RMP405i** and acts as an application program interface (**API**), allowing other

software developers to adapt existing DOS and Windows communications applications to communicate by radio. The new packet radio/modem will be made available to OEMs at **\$500 to \$900** depending on quantity. Motorola Inc., 1301 E. Algonquin Road, Schaumburg, IL 60196; (708)397-1000.

KERMIT ADDS TCP/IP NETWORKING - RUSSIAN

The Kermit file transfer protocol was developed at Columbia University to allow file transfers between mainframe computers sporting 7-bit communications ports and the 8-bit PC communications world. As a protocol, it has largely been supplanted by Chuck Forsberg's **ZMODEM**. But development on the program continues and today it is actually far more than a file transfer protocol. It has become virtually a communications program of more general capabilities.

Digital Press announced last September the latest issue of Kermit - Version 3.11. The package offered by Digital includes a book, *Using MS-DOS Kermit* by Christine M. Gianone and the software itself for **\$34.95**.

The new Kermit program includes built-in Transmission Control Protocol/Internet Protocol (**TCP/IP**) networking that works with any Ethernet, Token Ring, or other network adapter controlled by an Ethernet-style packet driver. Kermit can be used in place of telnet over Internet networks.

The program also supports Cyrillic character set conversion for transfer of Russian, Ukranian, and Belorussian text files. It also sports a new dialing directory, improved scripts, and support for hardware modem handshaking. Version 3.11 was prepared by Professor Joe R. Doupnik of Utah State University in Logan Utah. Digital Press, 12 Crosby Drive BUO/E94, Bedford, MA 01730; (800)344-4825.

SYSOP MODEM DISCOUNT PROGRAMS V.32 AND V.32bis MODEMS

Vendor	Support BBS	Sysop Price	List
ATI V.32	(416)756-4591	\$350	\$699
Cardinal 9600V42 V.32	none	\$269	\$699
CompuCom V.32bis	(408)738-4990	\$329	\$539
CompuCom V.32	(408)738-4990	\$229	\$339
Galaxy Networks UFO V.32bis	(818)998-1758fax	\$299	\$999
GVC SM-96 V.32	(201)579-2380	\$379	\$695
Hayes Ultra 144 V.32bis	(800)874-2937	\$599	\$1199
Hayes Ultra 96 V.32	(800)874-2937	\$399	\$999
Intel 14.4EX V.32bis	(503)645-6275	\$399	\$699
Intel 9600EX V.32	(503)645-6275	\$299	\$599
Multi-Tech MT932EAB V.32	(612)785-9875	\$449.50	\$899
Practical Peripherals PM9600SA	(818)706-2467	\$339	\$699
Twincom 9600 V.32	none	\$279	\$299
U.S. Robotics DS V.32bis	(708)982-5092	\$499	\$1295
Ven-Tel V.32	(408)922-0988	\$499	\$899
Viva 9624e V.32	(805)499-9649	\$350	\$649
ZyXEL U-1496E V.32bis	(714)693-0762	\$370	\$695

PCBOARD VERSION 14.5A RELEASED

Clark Development Company, Inc. has released their latest version of the popular **PCBoard** software. The new **14.5A** version provides a number of features over **14.5** including expanded text search capabilities, and a number of more intelligent features for dealing with third-party "door" programs. It automatically creates environment parameters during **DOOR** execution, updates the **USER** file for doors, and allows the system to run doors as a "shelled to" environment. A local keyboard "stuffing" function allows custom cleanup operations after door completion of a door.

The program also sports some features for in-house LAN use. Users can automatically access the first available node, and local file transfer operations are supported. The new version also adds bi-directional file transfer support.

Some of the new features for **14.5A** are not readily apparent, as they are designed to provide an intelligent interface for a soon to be released terminal program titled **PCBComm**. The new terminal program is under development to provide new callers with an easy to use interface to **PCBoard** bulletin board

systems. **PCBoard** and **PCBComm** will then work together to decrease the work a user has to perform to accomplish a given task. Versions for **DOS** and **Windows** are under development. Clark Development Company, Inc., 3950 South 700 East, Suite 303, Murray, Utah 84107; (801)261-1686 voice; (801)261-8987 fax; (801)261-8976 support BBS.

UNICODE VOLUME 1.0 PUBLISHED

The online lingua franca in the United States is of course **ASCII** (American Standard Code for Information Interchange). **ASCII** is an 8-bit standard that simply assigns alphabetic, numeric, and grammatical characters to numbers. Universally all computers in the United States now recognize **ASCII** and know that the decimal number **65**, for example, represents the upper case letter **A** while **66** represents **B** etc. And using the 8-bits available in a single transmitted character, there are **255** symbols that can be represented by **ASCII**.

One problem that's come up as we've begun connecting globally: **255** characters doesn't quite cover it. Many European alphabets sport characters not included in **ASCII**. When you get into Middle Eastern and Asian alphabets -

forget it. Many of these languages sport alphabets where the basic trimmed down economy version sports **5000** characters.

In general then, English is gaining ground as the common language online. But that leaves a lot of people worldwide unconnected. The solution seems to be to go to a two-byte or even four-byte character set. If two bytes were used to represent each character, for example, the resulting **16-bit** code could represent **65,535** different characters. This would be enough to represent most characters in all the alphabets of the world.

Unicode Inc. was formed by a consortium of American computer companies to promote a new **16-bit** character set standard termed **Unicode**. They've just published **Volume 1.0** of **Unicode** listing the code for every alphabet character in the world with the exception of the Han characters for Korean, Japanese, and Chinese. An abbreviated Han character set, designed as a common set for Asian languages, will be released later in 1992 as **Volume 2.0** of the code.

Converting to a new code, particularly one that involves a change in the number of bytes used to represent characters, is a revolutionary change for computer hardware and software. It will take decades to accomplish. One school of thought is that **Unicode** doesn't go far enough. What if **65,535** someday isn't enough? The International Standards Organization is methodically plodding toward a **32-bit** standard - **ISO 10646**. This four-byte proposal would allow up to **4,294,967,295** characters. Unicode Inc., 1965 Charleston Road, Mountain View, CA 94043; (415)961-4189.

INTEL INTRODUCES \$699 V.32bis MODEM

Intel Corporation has introduced a new high speed modem termed the **Intel 14.4EX**. The new model features **CCITT V.32bis** compatibility for **14,400 bps** connections and both **MNP 5** and **V.42bis** for error correction and compression.

Priced at **\$699**, the **Intel 14.4EX** modem offers 50 percent more performance than **9600 bps** modems. The Intel

14.4EX modem also includes free **CROSSTALK** communications software and installation diagnostic software. The CROSSTALK software offers a choice of **13** different terminal emulations and eight different file transfer protocols, including **ZMODEM**.

Intel's 14.4EX is an external, full-duplex modem featuring full compatibility with CCITT (International Consultative Committee on Telephone and Telegraph) V.32 modulation and V.42 error control. Intel's 14.4EX also uses **CCITT V.42bis** data compression to compress data as much as fourfold, providing maximum throughput of **57,600 bps**.

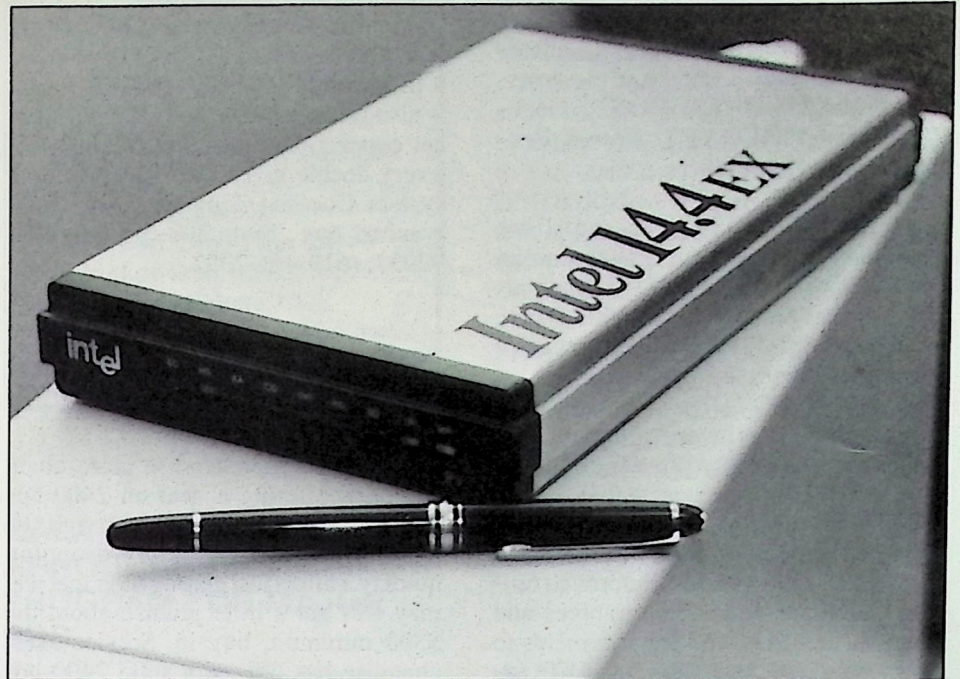
The modem features an attractive brushed stainless steel case with a plastic front panel somewhat similar to the conventional Hayes desktop modem style. The unit comes with an **Installation Guide**, a **Command Guide**, and a **Command Reference Card** offering some of the most extensive documentation we've seen with a modem.

The modem offers a couple of unique features. Intel's 14.4EX modem offers a quick connection option with the **ATSn** command. When enabled, this option can reduce the connect time by as much as half from the typical modem connection time of 12 to 16 seconds.

Intel's 14.4EX modem also automatically determines the best speed for optimal throughput. The modem has the ability to speed up and slow down to compensate for any gain or loss in phone line quality by adjusting the data transfer rate to 14,400 bps, 12,000 bps, 9600 bps, 7200 bps and 4800 bps as needed - with line changes occurring in as little as 200 milliseconds.

The Intel 14.4EX modem also supports communications with lower-speed modems by automatically negotiating the highest common speed when communicating with 9600 bps, 4800 bps, 2400 bps, 1200 bps or 300 bps modems.

To ensure compatibility with the North American installed base of Microcom Networking Protocol (MNP) modems, the Intel 14.4EX supports MNP 1-5 for error control and data compression.



Intel is also providing an upgrade path for owners of its 9600 bps modem. Until January 31, users can send their **9600EX** modems to Intel for upgrading to **V.32bis 14,400 bps**, at a cost of **\$200**. For information on the upgrade, call **(800)732-0690**.

Intel's 14.4EX modem offers a three-year limited warranty. Intel modems are sold in more than 2,000 retail computer stores in the United States and Canada.

The company has been pretty progressive in putting their own products into play. They offer a **FAXBACK** service at **(800)525-3019**. This is essentially a voice mail BBS where you can "order" free product information that is faxed to your own fax machine. Follow the audio instructions to order document **9434** which provides information on the **14.4EX**. You will be asked for your fax number and within a few minutes, the brochures and technical specifications come in on your fax.

They also provide a capable product support BBS at **(503)645-6275**. You can download information on their sysop discount program. Qualifying bulletin board operators can purchase the **14.4EX** for **\$399** - a **\$300** discount from the list price. Intel, 5200 NE Elam Young Parkway, Hillsboro, OR 97124; **(800)538-3373** voice; **(800)458-6231** fax; **(503)645-6275** BBS.

A MILLION U.S. STREET MAPS ON CD-ROM

Delorme Mapping is currently offering a **\$99 CD-ROM** disk containing over a million maps - and purportedly diagrams every street in every city, county, and state in the United States. Software supports searches by name, zip code, or phone number. The product runs under Windows 3.0 and requires a CD-ROM drive of course. Delorme Mapping, Main St. P.O. 298, Freeport, ME 04032; **(207)865-1234**.

COCONUT COMPUTING SHIPS RELEASE 3.2 OF COCONET HOST

Coconut Computing of La Jolla California has announced release of new versions of **COCONET HOST**, **CocoTalk**, and **COCONET Access Program** software products.

COCONET HOST is a multiline graphics-based BBS package running under SCO XENIX and UNIX operating systems on IBM compatible 80386 and 80486 PCs. The product provides a graphic interface, requiring a proprietary **COCONET Access Program** terminal software program, that we think is probably prettier and more functional in most respects than IBM's **PRODIGY** service. The new Release 3.2 of this product adds support for **YMODEM** file transfers, improved billing functions, embedded graphics and fonts in text files, and enhancements to personal mail, discussions, and file exchange areas. Host pricing ranges from \$395 for a two-line version up to \$2195 for the unlimited version.

Although **COCONET HOST** will provide a plain ASCII interface to callers using any terminal program, the striking graphics interface comes into play only for callers using the **COCONET Access Program (CAP)** terminal software. This software allows callers to view bit mapped images created with paint programs, scanned images, or vector graphics on an EGA, VGA, or Hercules display. The most recent version 91.10 includes a simpler configuration menu, support for the **YMODEM** transfers added to **COCONET HOST**, and smaller RAM requirement. The terminal program can be used with mouse or keyboard and is distributed freely to **COCONET HOST** users who then distribute it to their callers.

Drawbacks to this package? UNIX is neither inexpensive nor a joy to install on a PC and **COCONET HOST** requires it. UNIX also tends to stumble with regards to performance when faced with high-speed file transfers on simultaneous multiple lines. Electronic mail features on **COCONET** are comparatively limited. And without the **CAP** program, this system is indeed plain.

But using **CAP**, this is THE most strikingly beautiful and easy to use online package available anywhere, at any price. You have to see it to believe it. The company operates a support BBS where you can obtain the **CAP** program and see it in action at (619)456-0815. Coconut is also rumored to be working on Internet connections for **COCONET HOST** - very doable given the Unix operating system. Coconut Computing, Inc., 7946 Ivanhoe Ave., Suite 303, La Jolla, CA 92037; (619)456-2002

2400 BPS MODEM WITH MNP5 AND V.42BIS - \$109

The Service Merchandise store chain has been offering a deal on 2400 bps modems worthy of note. Although the price of V.32 modems is dropping quickly, callers just getting their feet wet may still get a little prunish about the \$300 minimum buy in. Service Merchandise has offered a solid 2400 bps external model at \$139 and has discounted it in December for as little as \$109.

The modem is the **Boca Research 2400**, Service Merchandise catalog number **E2400BCA**. This is an external modem with a metal case, front panel indicator lights, speaker, and a 25 to 9-pin RS-232 serial port adapter. It features both the **Microcom Networking Protocol (MNP)** level 1 through 5 for error correction and compression and the more advanced **CCITT V.42bis** error correction/compression protocol. It also features an unusual **FIVE YEAR** warranty and while most low-priced modems feature the ubiquitous terminal software from hell, **BITCOM**, the **Boca Research** modem comes with **DataStorm's PROCOMM** terminal program - in an earlier shareware, but still powerful version. We haven't tested it, but one Chicago BBS operator bought ten of them and can't stop raving about them. **Boca Research, Inc.**, 6413 Congress Ave., Boca Raton, FL 44387; (407)241-8088 voice; (407)997-0918 fax; (407)241-1601 BBS.

COMPUSERVE ADDS EAASY SABRE AIRLINE RESERVATIONS

CompuServe Information Service announced addition of American Airlines **EAASY SABRE** air travel database. **EAASY SABRE** provides access to some 45 million fares from 600 airlines worldwide, updated daily. The service also includes information on 27,000 hotels and 57 rental car companies. The **EAASY SABRE** system attempts to make sense of the hundreds of travel codes used by most travel agencies by providing context-sensitive help screens offering plain English equivalents and a **Bargain Finder** function that automatically finds the least expensive fare for any given itinerary. The service allows callers to check flight availability, locate lowest fares, purchase tickets, and reserve hotel rooms and rental cars online. CompuServe currently claims 890,000 users. CompuServe Information Service, 5000 Arlington Centre Boulevard, PO Box 20212, Columbus, OH 43220; (800)848-8199; (614)457-8600.

ONE BBSCON CONVENTION OPENS FOR REGISTRATION

Plans for the **Online Networking Exposition and Bulletin Board System Convention (ONE BBSCON)** have firmed up and the **ONE, Inc.** group began taking registrations as of **January 1, 1992**. This meeting of over 1000 BBS operators will be held at the **Stouffer Concourse Hotel**, adjacent to **Denver's Stapleton International Airport**, **August 13-16, 1992**.

The convention is planned primarily as an information event with three days of sessions covering the BBS industry. Five session tracks are planned with sessions on BBS networks, the Internet, BBS software and technology, education and political issues, and an expanded series of sessions on how to operate a BBS for profit. A trade show floor area will accommodate fifty industry vendors displaying the latest in online software and technology.

The Stouffer Concourse Hotel provides 400 rooms and function space for the event. The entire hotel is reserved for the convention August 13-16 and a special convention room rate of \$75 per room per night single/double occupancy and \$85 triple/quadruple is a significant discount from Stouffer's normal \$130 per night rate. According to Andrew Harper's Hideaway Report Newsletter, Stouffer Concourse rates number one among the top ten U.S. airport hotels based on an annual survey of traveling business executives.

Registration for ONE BBSCON has been set at \$225 per person with discounts to \$175 for registrations received prior to August 1 and to \$125 for those received before May 1, 1992. ONE, Inc., 4255 South Buckley Road, Suite 308, Aurora, CO, 80013; (303)693-5253 voice; (303)693-5432 BBS; (303)693-5518 fax.

EVEREX 560MB TAPE BACKUP UNIT

Everex now offers a 560MB mini cartridge tape backup system. The Excel 560 works on a Small Computer Systems Interface (SCSI) and with data compression can store over 1 GB of data on a single cartridge. The device is purportedly quite fast with a 32MB per minute data rate. External version is \$1729. Everex, (800)628-3837.

OVER ONE THIRD OF TOP SELLING SOFTWARE PACKAGES NOW COMMUNICATIONS RELATED

We noted an interesting element to the latest Ingram Micro software sales rankings. Five of the top fifteen packages ranked by sales were purely telecommunications software products. Additionally, Microsoft Windows, Microsoft Office for Windows, PC Tools, and Microsoft Works all feature an integral communications program. Procomm Plus 2.0, once a shareware terminal program, actually ranked third in the nation in commercial software sales. The sales as of November 1 based on 12,000 retail stores.

1. Windows 3.0
2. QEMM-386 6.0
3. Procomm Plus 2.0
4. Quicken 5.0
5. Calendar Creator Plus 4.0
6. Norton Utilities 6.01
7. pcAnywhere IV
8. Microsoft Office for Windows
9. Quickpay
10. Direct Access 5.1
11. Carbon Copy Plus 6.0
12. Prodigy Start-up Kit 3.1
13. PC Tools Deluxe 7.1
14. Norton Desktop for Windows
15. Microsoft Works 2.0

GALACTICOMM ANNOUNCES TERMINAL PROGRAM FOR MAJOR BBS

Bulletin boards offer companies who employ them some notable advantages in cost and efficiency. The store and forward nature of BBSs can vastly improve communications between employees on the go, often in different time zones. The problem is often in training employees to use the systems. Once they work with one for a few weeks, they generally do NOT want to go back to telephone tag. But there is a learning curve when starting out with terminal software such as Procomm, Crosstalk, or Qmodem. While a case could be made that it is well worth the effort, many of these people need about 10% of the features of these programs and just want to dial the system and read their e-mail.

Galacticomm, Inc. has announced an easy to use terminal program MAJOR BBS operators can offer their callers at no charge with no license or royalty fees. It installs in seconds and can be configured by the system operator so that the callers really don't have to deal with much in the way of options. The program actually searches and finds a modem connected to the host computer and initializes it. The user enters DIAL BBSNAME from the DOS command line and they're on the system.

The program is appropriately enough titled DIAL. It's not competitive with a full featured terminal product, but it's not meant to be. It allows a company to hand a diskette to one of their non-technical people and they can use a simple command to access a specific BBS. It supports one file transfer protocol which eliminates the whole issue of which one to use. And it supports the right one - ZMODEM for file transfers. The system operator can even set the login ID and password - eliminating the caller from the login process completely.

Both DIAL and the companion sysop configuration utility CFGDIAL are freely available for download from the Galacticomm demo BBS at (305)583-7808 in the MAJORBBS file directory. Galacticomm, Inc. 4101 SW 47 Ave., Suite 101, Fort Lauderdale, FL 33314; (305)583-5990 voice; (305)583-7846 fax.

TELEBIT CORP. ANNOUNCES \$499 T3000 MODEM PURCHASE PLAN

By Alan Bechtold - BPS

Telebit Corp., maker of high-speed modems, dial-up networking and wide-area communications products, has introduced a Loyalty Pays program offering existing Telebit modem customers the opportunity to purchase the new T3000 modem at a reduced price and receive a complimentary upgrade to Telebit's Packetized Ensemble Protocol (PEP).

The program allows customers owning specific Telebit modems to purchase a maximum of two T3000 standalone models at the reduced price of \$499 each, saving the customer over \$500 per modem. Models that qualify for the program include the T1000, T2000, TrailBlazer Plus, T1500, T1600, T2500, T3000, and QBlazer.

Telebit is also supplying the customer with a complimentary PEP upgrade with each T3000 purchase.

Telebit's PEP technology, first implemented with the TrailBlazer product family, divides the voice band width of a telephone line into 511 separate chan-

BOARDWATCH MAGAZINE

Announces the Boardwatch 100 Reader's Choice Bulletin Board Contest

WIN A FREE U.S. ROBOTICS HIGH SPEED MODEM

Boardwatch Magazine is sponsoring a contest to find the 100 most popular bulletin board systems in North America - and the ONE BBS most popular among callers. The contest will run from January 1, 1992 through July 1, 1992. Winners will be announced at the Online Networking Exposition and BBS Convention (ONE BBSCON) held at the Stouffer Concourse Hotel in Denver Colorado, August 13-16, 1992. The Boardwatch 100 list will be published in subsequent issues of Boardwatch Magazine and distributed in electronic form world-wide.

PRIZES FOR VOTERS

All valid ballots submitted by voters will be entered in a random sweepstakes drawing. As of the opening date of this contest, prizes include two U.S. Robotics Courier V.32bis modems - and more are on the way. Two valid ballots will be selected from all entries and each will receive a free USR modem - the high speed modem used by more BBS operators than any other. Each voter can vote once, for a single bulletin board system. Each ballot must be fully completed, and we will verify ballots as necessary.

HOW TO VOTE

1. Complete this ballot and mail or fax to:

BOARDWATCH MAGAZINE
READERS CHOICE BBS CONTEST
7586 West Jewell Ave., Suite 200
Lakewood, CO 80232
Fax (303) 986-8754

. Or, dial the Boardwatch BBS at (303) 973-4222 and complete the online ballot provided on the main menu. Balloting closes at Midnight, July 1, 1992.
NOTE: Boardwatch Magazine BBS is NOT eligible to win.

PRIZES FOR BULLETIN BOARD OPERATORS

1ST PRIZE

Air fare, hotel accommodations and registration at ONE BBSCON for two is awarded to the system receiving the most votes. Additionally, the system will be featured on the cover of Boardwatch Magazine with an accompanying feature length story about their system and a free full-page black and white advertisement in Boardwatch Magazine for a period of six months. Boardwatch Readers Choice Top Rated BBS plaque to be awarded at a special award ceremony at ONE BBSCON.

TOP TEN

The ten most popular bulletin boards selected by the voters will each receive an award plaque, a feature story on their system in Boardwatch Magazine, a special top ten BBS listing in the magazine, and a quarter-page black and white advertisement in three successive issues. Additionally, they will be listed in the Boardwatch 100 BBS list.

TOP ONE HUNDRED

The 100 bulletin boards receiving the most votes will each be listed in the Boardwatch 100 readers choice BBS list. This list will be published in Boardwatch Magazine and freely distributed electronically on thousands of bulletin boards world-wide.

We held a very rough form of this contest several years ago. It generated less than 1,000 votes to select the top 100 bulletin boards. That means they averaged just 10 votes per board. Your vote can have a tremendous impact on the outcome of this contest!

The Boardwatch 100 Reader's Choice Bulletin Board Contest

TITLE OF BBS YOU NOMINATE AS THE BEST IN NORTH AMERICA: _____

PRIMARY BBS ACCESS TELEPHONE NUMBER: _____

WHY IS THIS THE BEST BBS IN NORTH AMERICA? _____

VOTER NAME: _____ VOICE TELEPHONE NUMBER: _____

STREET ADDRESS: _____

CITY: _____ STATE/PROVINCE: _____ ZIP OR POSTAL CODE: _____ COUNTRY: _____

COMMUNICATIONS SOFTWARE YOU USE: _____

MODEM MANUFACTURER AND MODEL: _____

HIGHEST MODEM SPEED YOUR MODEM SUPPORTS? [] 1200 bps [] 2400 bps [] 9600 bps [] 14,400 bps

AGE: _____ PROFESSION: _____

SIGNATURE: _____ DATE: _____

nels, analyzes their data-carrying capability and then selects the quantity of data to send on each channel.

As line noise increases, PEP modems have the capability to gradually reduce the transmission speed in 100 bps decrements maximizing error-free transmissions over the noisiest lines.

"Telebit values its customers and the Loyalty Pays program is our opportunity to give them the standards of V.32 and V.32bis technology with the robust performance of PEP at an extremely low price," said Michael Ballard, vice president of business development.

The **Loyalty Pays** program will run from Dec. 9, 1991 through March 31, 1992. After this expiration date, the T3000 will be available for a list price of **\$949** and the PEP upgrade for **\$199**. Telebit Corp., 1315 Chesapeake Terrace, Sunnyvale, CA 94089; (800)835-3248 or (408)734-4333.

MUSTANG INTRODUCES QMODEM 5.0 - FIRST RETAIL VERSION OF POPULAR SHAREWARE COMMUNICATIONS PACKAGE

Mustang Software Inc., developer of **Wildcat!** BBS software, has followed up on the October acquisition of The Forbin Project's **Qmodem** terminal program with a new release of the software as a commercial program available on store shelves. Most notably, the new version **5.0** of **Qmodem** includes a new off-line mail reader. **Qmodem** becomes the first commercial terminal software offering with BBS offline mail capabilities.

The new release features a list price of **\$99**, widely discounted by retail distributors such as Software Etc. The company will promote the new version to existing **Qmodem** users and **Wildcat!** system operators at a special **\$35** price. The previous version **4.5** will remain shareware as a demonstration program.

Qmodem is going up on the shelf against such leaders as **Procomm Plus 2.0**, also previously a shareware title. According to Ingram Micro, **Procomm** is currently the third most popular software product

in the country after Microsoft Windows 3.0 and Quarterdeck's **QEMM** memory manager. Given **Qmodem's** popularity as a shareware title with an estimated **250,000** users, it should do well on the shelf as well.

With version **5.0**, **Qmodem** becomes the first terminal program to incorporate an offline mail reader program. Offline mail readers allow callers to dial in to a local BBS and download a custom tailored mail packet containing messages to them and from specific message conferences they wish to monitor. They then logoff the system and read/respond to messages offline on their own system at their leisure. Later, they can dial the same BBS and upload a packet of mail responses which are then inserted into the conferences by the BBS software. This concept originated with Sparky Herring's **Qmail Deluxe** program and his **.QWK** message format has become a standard on bulletin board systems.

MSI had previously acquired **Silly Little Mail Reader (SLMR)** - usually pronounced "slimer" which was a particularly easy to install reader. Users can easily read, edit, and reply to messages in dozens of conferences - all OFF line. This technology has been incorporated in **Qmodem 5.0**, bringing the dialing and offline mail capabilities under one package.

The new version also includes an expanded dialing directory function. Up to **200** numbers can be stored in each directory and the program can access multiple directories. Several new terminal emulations have been added and the installation simplified to allow users to simply pick their modem from a pick list of **90** widely used modems. This eliminates the usual new caller hurdle of trying to divine the modem initialization string for their modem.

Qmodem has a good script language used to automate routine online tasks. The new version includes an improved "learn mode" that allows non-technical users to generate scripts by simply recording their activities. Mustang Software, Inc., Mustang Software, Inc., P.O. Box 2264, Bakersfield, CA 93303; **800-999-9619** voice; **(805)395-0713** fax; **(805)395-0650** BBS.

BOARDWATCH MAGAZINE ANNOUNCES BOARDWATCH 100 READER'S CHOICE BBS CONTEST

Boardwatch Magazine has announced a **Boardwatch 100 Reader's Choice BBS Contest**, to run from **January 1, 1992** through **July 1, 1992**. Callers from across North America are invited to submit ballots nominating their favorite BBS to the **Boardwatch 100**.

The contest is open to any electronic bulletin board system operating in North America. Each caller will be limited to a single ballot and ballots will be verified as necessary by caller address and telephone number.

The operators of the BBS receiving the most nominations will attend the **ONE BBSCON** as the guest of *Boardwatch Magazine* to receive their award. Air fare, hotel accommodations, and registration for two will be awarded along with a plaque honoring the number one BBS in North America. Additionally, the top rated system will be featured in a cover story in *Boardwatch Magazine*, and will be provided with a full page black and white advertisement for their system in *Boardwatch Magazine* for a period of six months.

The other nine of the top ten BBS selected by Boardwatch Readers will each receive an award plaque, feature stories on their systems in Boardwatch Magazine, inclusion in a special **TOP TEN** listing, and a free quarter page advertisement in Boardwatch Magazine for three months.

The 100 bulletin boards receiving the most votes will be ranked by vote in the **Boardwatch 100 Reader's Choice BBS List**, published in Boardwatch Magazine and freely distributed electronically world wide.

A random sweepstakes drawing will be held from all valid ballots received and **U.S. Robotics V.32bis** modems provided by USR will be awarded to two callers.

Ballots printed in Boardwatch Magazine, or downloaded in electronic form from any bulletin board system



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Why advertise your BBS only in your area or in a media where you can not be sure if the person that is reading your ad has a computer? How do you know that the business community Worldwide is not interested in the products or services that your BBS offers? There is a large number of people, world-wide, seeking many types of data, facts, trade, professional services or specialized information on various cities around the world. If your BBS provides the information or advertises the services that those people are looking for — CONGRATULATIONS — you have yourself a customer.... Well, only if they know that your BBS exists.

International Exposure

EURONET is providing your BBS with a comprehensive package, when upgrading your system, adding to your efforts of differentiating your BBS from the rest at no additional cost. Even though you may already have software running your BBS, think of the future... **PREPARE YOURSELF FOR THE GLOBAL COMPETITION..** with the TBBS advance communication business system from Esoft, INC. your system may establish a **MULTI-LINGUAL** communication environment that provides simultaneous access to shared files and data with up to 64 users in a single PC using DOS...**BE PREPARED TO COMPETE..** on a high-speed environment supporting V.32 and V.42bis. This software in combination with added modules like TDBS (the Data Base System) which extends the transparent file sharing capabilities of TBBS to the dBASE language, allows your BBS to offer any multiuser remote access to any of your database **MULTI-LINGUAL** applications..**THINK OF THE GLOBAL POSSIBILITIES...**and, when you complete your system with TIMS (The Integrated Mail System) module your BBS will be **READY TO COMPETE** with ANYBODY, ANYWHERE, ANYTIME... Along with the purchase of TBBS and TDBS software modules EURONET is including several benefits.

The Power To Grow

☐ EURONET will promote your BBS by providing a description of all your services (150 words maximum) for a full **FREE YEAR** in a media with world-wide access, under the title of: Public and Corporate Source of On-line Information Services.

☐ EURONET will furnish your BBS with a full **FREE YEAR** subscription of Boardwatch Magazine to anywhere in the world.

Price Information

Cat.	Version	TBBS	TDBS	TOTAL
(A)	16 lines	975	1,075	\$2,050
(B)	32 lines	1,575	1,875	3,450
(C)	64 lines	1,875	2,375	4,250

(D) International BBS Promotion (1 year)	675
(E) V.32 Modem with MNP-5, V.42 & V.42 bis	885

A **FREE** year subscription to Boardwatch Magazine and a full **FREE** year promotion of the BBS is included in categories (A), (B) and (C).



(The above prices do not include shipping and handling)

If you want to be considered **THE** on-line information service provider you have always dreamed of...**ACT NOW!** This is the time to prepare for the **GLOBAL** competition...**THE LONGER YOU POSTPONE YOUR MOVE, THE FURTHER AHEAD THE COMPETITION WILL BE!**

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Address _____	Card No: _____
City _____ State _____ Zip-Code _____	
Country _____ Telephone (____) _____	Exp. date: ____/____/____
Modem setting and telephone (____) _____	Print full name: _____
Please include a description of your BBS Services (150 words maximum) _____	
Indicate the category letter and total price Cat.# _____	Total price \$ _____
BBS owner's signature: _____	Date _____

and printed out, may be mailed to: Boardwatch Magazine, Reader's Choice BBS Contest, 7586 West Jewell Ave, Suite 200, Lakewood, CO 80232 or faxed to (303)986-8754. Callers who prefer to vote electronically may dial the Boardwatch BBS at (303)973-4222 to complete an online electronic ballot - (press V from main menu). Each caller is limited to a single ballot and Boardwatch Magazine will verify/discard ballots as necessary. All ballots must be completed in full and received prior to midnight, **July 1, 1992**. Contest results will be announced at the **ONE BBSCON** scheduled for **August 13-16, 1992** in Denver Colorado.

ANTERIOR TECHNOLOGY OFFERS WIRELESS HEADLINE NEWS SERVICES TO PAGERS

by Alan Bechtold - BPS

Anterior Technology's AgentSee Headlines is a new information service supplying headlines of domestic and international news, business and financial developments, sporting events and weather reports to alphanumeric paging subscribers in both local and nationwide markets.

"AgentSee Headlines are derived from 14 newswires and provide an extensive breadth of coverage of national and world news," said Geoffrey S. Goodfellow, president and CEO of Anterior Technology. "The headlines service can greatly enhance the value of a carrier's alphanumeric paging service."

The standard AgentSee Headlines service includes transmission of domestic and international news, business developments and sports event headlines at 8 a.m., Noon, and 4 p.m., in each carrier's local time zone. Local weather reports are supplied once daily, in the morning, and the Dow Jones average is transmitted every half hour during market hours.

The service can be custom-tailored for each radio common carrier's specific market needs and air-time requirements. Headline categories can be batched and sent to carriers at specific times

throughout the day. An hourly update option is available if more frequent reports are desired.

Other common indicators are available on a custom basis, including the 10 Most Active Stocks, Spot Crude Prices, Precious Metals Prices and Futures Markets.

Headlines are provided to the carrier preformatted and are relayed to the carrier's paging terminal from Anterior's data center over the public switched telephone network using standard dial-up modems. A paging carrier need not purchase additional special equipment, nor install special satellite links, hardware, or software. The service is structured for a carrier to transmit on a common paging "cap" or identification code, with or without a per-subscriber charge.

A no-obligation one-month trial is being offered to introduce paging carriers to the service. "We believe the service will sell itself when paging carrier operators and users see it," Goodfellow said.

The standard AgentSee Headlines service fee is US \$600 per city on a month-by-month basis. Additional cities may be added on a sliding cost scale.

Anterior Technology is a communications services company, and has been providing turnkey electronic mail gateway and information services since 1988. In addition to providing "wired" E-mail gateway services for Lotus cc:Mail, Internet and Unix, UUCP and USENET sites, Anterior offers Radio-Mail, a wireless electronic mail and information delivery service.

For more information, contact: Anterior Technology, (415)328-5615.

TELEBIT QBLAZER REVIEW

by Dave Hughes

Without looking at the price tag (\$740 retail, \$560 direct from Telebit as an opener), I sent for overnight delivery of the new (6 weeks shipping) Telebit Q-Blazer 9,600 baud PORTABLE (9 volts, 2 hours) V.32, V.42bis, 2400/1200 CCITT and Bell, MNP through 5, modem which is a 2 1/4 inch cube (i.e.

mighty small) modem. I was as excited as a kid on Christmas when it came. I can report the following:

That cube is **small** and very light (8 oz). Just as advertised.

As I suspected, it needs an external transformer for wall power. BUT the transformer is also quite small (whew!) Smaller than the cube modem itself, designed to plug directly into the wall with two prongs, with a very light 6-foot DC voltage line to go into the modem with a standard little tubular plus/minus power plug. Industry standard.

The transformer, as I also suspected does not show the ability to be used with 220 (European) volts, but is 110 volts 60 cycle input and 9 volts, 400 Ma output. BUT, the design of the modem connector, transformer etc. tells me that if I can't use it on 220, all I would need is a 220 50 cycle in, 400 Ma or so, 9 volt out, and a standard jack connector and I can do it. Nothing about the small transformer looks proprietary - in fact it is brand named "Strong World" made in Taiwan. And the modem is designed to work on Bell (US) and CCITT standards for its various speeds. It's international.

Then the little case holds the cube, the transformer, all cables and connectors comfortably. With velcro strips and, zipper, and a strap back which makes it look like a quarter-sized soft material Fanny pack, and could actually be put on a belt or computer case strap. Nice ergonomic design throughout. One fat manual and a little cheat sheet folder which will fit in the case. It also comes with a terminal program I never heard of, but has been optimized for the QBlazer, called MTEZ, from Magic Soft. And it has just about all the features one would need - from ZMODEM protocols through many terminal emulations - and menu-driven ways to put the QBlazer into many different Register and AT command settings.

And the QBlazer has plenty of modes - 42 Registers and 30 AT modes. They look like the complete set of a powerful T2500 Telebit (which is a huge modem with an equally large power supply), less the proprietary PEP protocol. But with the V.42bis, the QBlazer is rated up to 38,400 bits per second when connected to any 9600 bps V.42bis modem.

The cube has one **RJ11** outlet, the male 9 volt prong receptacle, and a PS2 round DIN connector RS232 port. But then Telebit includes several data connectors, covering all bets. A Mac serial cable, a DIN to 9 pin RS232 connector, and a 9 pin to 25 pin RS232 adapter. All of which fit in the case too.

There are, surprisingly enough, 8 status lights on the front - **SD, RD, DCD, DTR, OH, EC, MR, LB**. **EC** for error correcting - which blinks when compression - either V.42bis or MNP5 are in use. And the **MR** light blinks slowly to conserve the battery if it is used. The **LB** is a low battery light. All very small recessed LEDs, but very informative.

Looking inside it even has a speaker!! Plenty loud.

The battery compartment is plain standard, with one of those 9 volt battery snap on connectors on a short wire (which means, as I learned long ago with the Touchbase modem you can use to get 9 volts in other ways too.)

I have used the QBlazer on my Toshiba laptop, a 386 Notebook, with Procomm, CTlink and PP3 NAPLPS terminal programs, and on a Mac LC under Zterm. Both with wall power and on Radio Shack 9v alkaline batteries. It uses the AT&T digital signal processor (DSP) chip to perform 9600 bps V.32 connections. With the exception of two 2400 baud Brand X modems I dialed into, it has connected properly to over twenty 9600, 2400, and 1200 baud modems. These include Hayes, USRobotics, Multitech (in a call to a BBS in Norway) and Telebit T2500s on Colorado Supernet. All at a true 9600 error checking baud. I could not detect any differences with this tiny modem from the 9600s I have periodically used for the same purpose.

I have not had a chance to measure throughput, but I can say I am just as happy the morning after getting this not-so-cheap modem, as I was whenever I got a train for Christmas, lo those many years ago.

Since I took a chance when I bought a more powerful notebook computer with a Marstek scanner port built in (a very rare feature), and so forfeited the pos-

sibility of an internal modem, this little beauty - with battery power - really matches the power of the modem to the power of my 20MHz 386 laptop. I have to make many a demonstration on the road with my laptop. Now I have all the modem power I need for calling from just about any phone in the world. Like ET, I really *can* call home through all the line noise that defeats other modems.

The QBlazer features a two year warranty. Telebit Corp., 1315 Chesapeake Terrace, Sunnyvale, CA 94089; (800)835-3248 or (408)734-4333.

[Dave Hughes is president of Old Colorado City Communications. He can be reached by Internet e-mail as dave%oldcolo@csn.org - Editor].

AT&T EXITS TELEGRAPH BUSINESS

Familiar to the world over through the clackety-clack of ticker tape machines and teletypewriters, telegraphy has been

gradually bowing out of the telecommunications picture during the last twenty years.

The nonstop chatter has been replaced by the hum of laser printers and the electronic beeps on computer screens. AT&T, a leading innovator and major service provider of telegraphy, announced it is withdrawing the service due to the universal availability of lower-cost, higher quality digital telecommunications services.

"The incredible advances in our industry mean customers can get more for less," said Wes Bartlett, AT&T district manager, Business Communications Services. "Today's digital technology can transmit information hundreds of thousands of times faster than telegraphy and is considerably more cost-effective for users."

"Telegraphy has been to the twentieth century what state-of-the-art digital telecommunications services will be to



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Standard features include:

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Chicagoland's Largest System

Since 1988

Aquila has filled the computer screens of Chicagoland for over three years, growing from a single modem line system in 1988 to over 25 lines in 1992. Aquila's success over the years is due to the enthusiastic support of our users. New callers are encouraged to download our current file list and electronic mail conference listing. A short guided tour highlighting our system services is also available for new users. All of our information is automatically mailed to you to read in the comfort of your home or office. So pick up your modem and give us a call! You will find Aquila BBS to be the most valuable bulletin board in your dialer.

Programs - Thousands On-Line

Give your modem a workout! We add new shareware and public domain programs everyday. Over 400 programs are added weekly. With more than 5 Gigabytes of on-line storage, we stock over 50 thousand programs. Aquila makes it easy to find the programs that are important to you, by organizing them into 120+ categories everyday.

We cater to the Windows User

With Windows becoming the most popular user interface around, we make an extra effort to keep you supplied with the latest programs and enhancements by devoting a special conference area just for Windows containing 2000+ files organized into 40+ file directories categories.

Our organization and the latest programs make our file areas the most popular around. These are just a few of our most popular categories available:

Diagnostic Utilities
System Enhancements
File Organizers
Word Processing

Computer Games
Music and Midi Sound Files
Computer Animations
CAD Drawing Utilities

Business - Finance - Tax
Novell and Lan Utilities
Database
Programming

Icons - Icon Managers
Wallpaper - BMP's
Multi-Media Related
Fonts - Font Utilities

New User Information

All first time callers receive by mail, our printed 'New User Information' and 'E-Mail Conference Directory' guide, as well as a 'Quick Command Guide' to help you get the most out of Aquila. The new user information covers system services such as answers to commonly asked questions, USA Today, Boardwatch Magazine, and Electronic Mail off-line readers. The 'Quick Command Guide' is a desktop lookup for using Aquila commands.

AQUILA BBS

708-820-8344

New User Information

Aquila Starter Kit

Callers that are new to modem communications will find 'The Aquila Starter Kit' a great time-saver. Easy for the beginner and helpful for the expert! This \$39.95 kit includes the following:

Procomm (communications program)
Full documentation for all BBS commands
Off-line file browsing program

Our complete file listing on floppy disk
Off-Line E-Mail Reader
Three month basic membership

Around The World E-MAIL

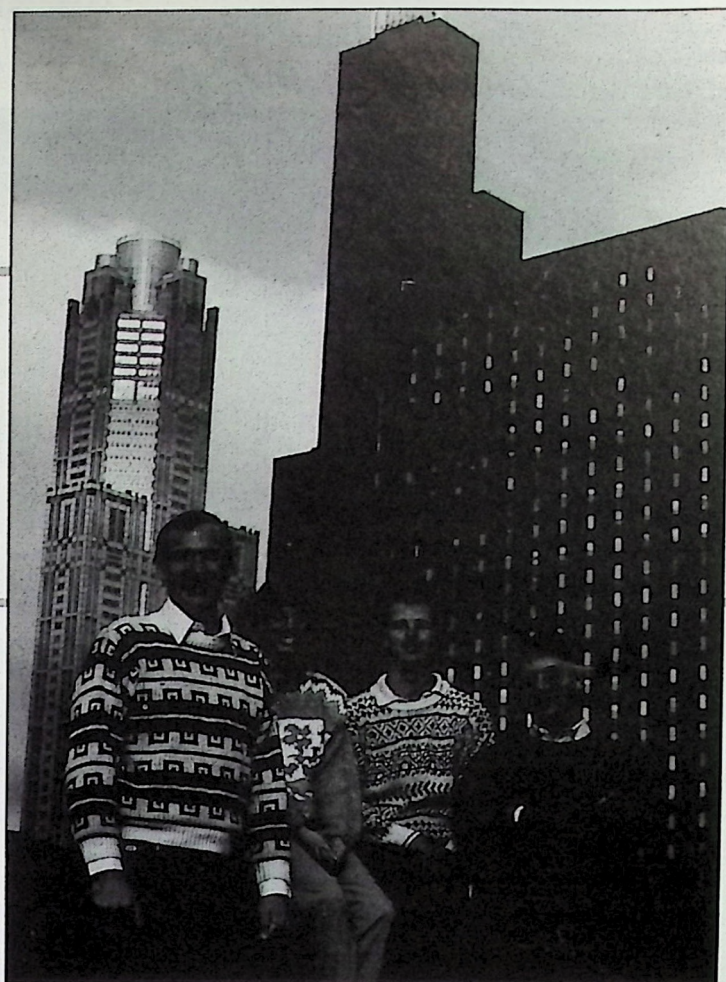
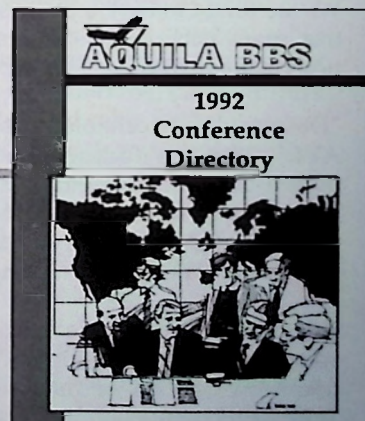
Over 450 Conference Topics

We currently echo to and from ILink, RIME, Fido-Net and Throbneth with more to come in the near future. You can get virtually any question answered here and join in on lively discussions with people from across the country and around the world. We also publish our own 'E-Mail Directory' that is sent to all users of Aquila BBS. This directory lists all of our conferences by category and gives a brief description of the topic of each one. Here is a small sampling of over 450 interesting topics that we offer:

General Discussion
Computer Related

Vendor Support
Programming Languages

For-Sale
Current Events



The AQUILA BBS Team (Left to right: Kevin & Kristy Behrens, Steve Williams, Chris Babb)

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the next century," Bartlett added. "We are proud of our contributions in both areas."

In some sense, telegraphy was actually the first digital service - although a very simplified version compared with today's technology - since it was produced on the customer's premises in terms of "on or off," or "dash or space." It was converted to analog for transmission.

Telegraphy usage accelerated rapidly during the 1920s when the financial industry adopted the technology to send records of transactions. At that time, news organizations began using telegraph service for transmitting stories between offices.

In November, 1931 the Bell System inaugurated the teletypewriter exchange service, often called the **TWX** (pronounced "twicks") service. It provided a complete communications system for the written word, including teletypewriters, transmission channels and switchboards.

Telegraphy was adopted by many kinds of businesses, including utility companies, alarm companies, airlines, and brokerages as well as government agencies. It was used heavily through the 1960s.

Most of AT&T's telegraph service customers have been converted to digital private line services such as **DATAPHONE** Digital Service and **ACCUNET**.

"Our name remains American Telephone and Telegraph," Bartlett said. "it is an historic name and our legacy. We are proud to have a corporate name that spans generations of communications technology."

"Despite rapid technological change, AT&T remains focused on helping people communicate," Bartlett added. "Telegraphy helped bring us to this point. Digital technology is taking us into a new era of global messaging."

Telegraph service made it possible to communicate large volumes of information between two or more locations. Telegraph circuits permitted customers to send to each other a printed or hard

copy version of the information at reasonably cost, which was impractical with the telephone. At its peak in 1970, telegraphy could transmit data at 150 bits per second.

1887: First private-line telegraph service installed for L.H. Taylor & Co., brokers, between their offices in New York and Philadelphia.

1888: First service for news media customer, Globe Newspaper Company, between New York and Boston

1915: Teletype offers speeds of 30 or 50 words per minute.

1920s: Press and financial markets create a boom for usage of the service.

1939: Speed reaches 75 words per minute.

1944: Speed reaches 100 words per minute.

1957: Teleprinter introduces speeds of 300 words per minute.

1970s: Decline in usage begins as electronic data processing replaces many telegraph functions.

1980s: Wireless and digital methods accelerate decline

1991: AT&T exits telegraph service.

U.S. ROBOTICS RELEASES FIRST EARNINGS REPORT

U.S. Robotics has released its first financial report as a publicly traded company (**NASDAQ:USRX**) with the results for the fourth quarter and the fiscal year ended September 30, 1991. USR had a public stock offering on October 11.

Revenues for the quarter were **\$21,609,000**, a **35.9%** improvement over the same quarter last year. Net income for the period was **\$1,853,000** - a **50.7%** increase representing earnings of **\$0.22** per share.

Revenues for the fiscal year were **\$78,787,000**, a **39.8%** increase over the **\$56,359,000** for the previous year. Net income was **\$7,343,000** or **\$0.78** per share for a **55.3%** increase in earnings.

RUNNING A BBS ON A MACINTOSH

by Maria L. Langer

Each issue of Boardwatch Magazine is full of articles about BBSs run on IBM-compatible computers. But what if you want to run a BBS on a Macintosh? This article will summarize the basic hardware and software requirements for setting up a Macintosh BBS.

HARDWARE

Hardware includes not only a computer, but a hard disk, a modem, and a telephone line. Let's take a closer look at each.

COMPUTER

There are many Macintosh models to choose from. They vary in features, speed, expandability, and price. Just about any Macintosh model can be used to run a BBS, including the very early models (if they are properly upgraded).

Look for these things:

- **RAM.** You'll need at least 1MB of RAM to run under System 6 and 2.5MB of RAM to run under System 7. All current Macintosh models come with at least 1MB of RAM. Older machines, like the 512Ke, can be upgraded to handle additional RAM with some limitations.

- **SCSI Port.** A SCSI (Small Computer Systems Interface - pronounced "scuzzy") port enables you to connect your Macintosh to a hard disk or other external storage device. The Mac Plus, introduced in January 1986, and all Macs released after it, feature a SCSI port. An older machine may be upgraded to install a SCSI port.

- **Speed.** The Mac Plus, SE, and Classic run at 8MHz. This should be sufficient for most BBSs. But if you plan to include FidoNet-compatible message areas (to be discussed in next month's article) on your BBS, you might want a faster system. Macintosh models are

available with speeds of up to 40MHz -- but you'll pay dearly for some of these speed demons.

- Size and expandability. A compact Mac is the original style Macintosh. The CPU, monitor, and disk drive(s) are contained in one unit. Examples include the Mac Plus, SE, SE/30, Classic, and Classic II. These Macs need only one square foot of desk space. A **component** Mac comes in pieces. The CPU case might include the CPU, floppy disk(s), and hard disk. A color or monochrome monitor is sold separately. Examples include the Mac II series, the LC, and the Quadras. These Macs are generally more flexible and expandable. You can mix and match components to make up exactly the system you need and most CPUs offer several slots for internal modems, serial cards, and accelerators.

No matter which Macintosh you choose, you'll need a CPU, floppy disk drive, SCSI port, monitor, keyboard, mouse, and at least 1MB of RAM.

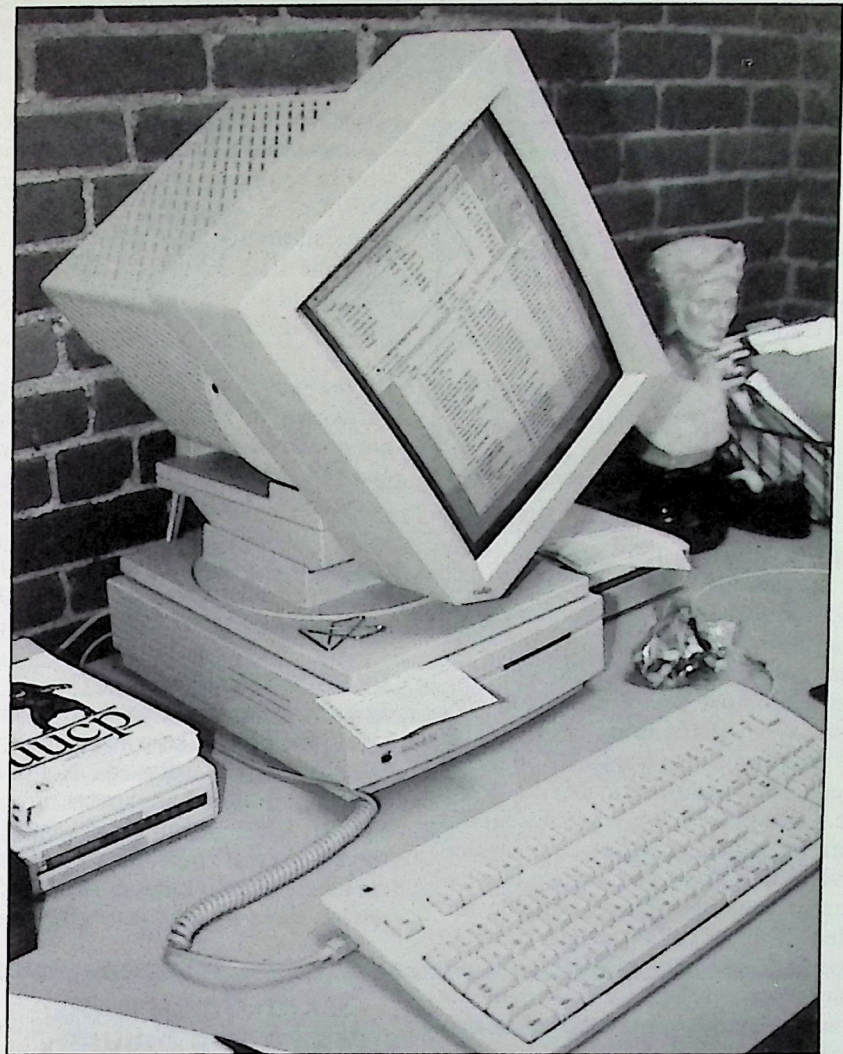
HARD DISK OR TAPE DRIVE

Although it is possible to run a BBS without a hard disk or tape drive, it isn't recommended. You'll need some kind of high capacity storage media to store your System software, BBS programs and files, messages, downloadable files, and utility software.

- Hard disk. A hard disk can be internal or external or a combination of both. At least 10MB of storage space is recommended. Your storage needs will vary with the features you plan to offer callers. A 40MB, 80MB, or 100MB hard disk should be fine for most BBSs.

- Tape Drive. A tape cartridge drive is another option for storage - although generally considered too slow for most BBS applications. Cartridge drives commonly have capacities of 45MB and 80MB. They can be very useful in making backups of your hard drive.

- Daisy chaining. External hard disks and tape cartridge drives both connect to your Mac through the SCSI port. The best thing about a SCSI port is that you can daisy chain up to seven SCSI devices. This makes it very easy to expand your BBS -- simply add another storage device.



MODEM AND MODEM CABLE

The modem makes it possible for your computer to communicate with other computers over phone lines. Some things to consider:

- Hayes compatibility. This is an important issue when shopping for a modem. Most BBS software can only communicate with modems that use the Hayes AT Command Set. To buy a modem that is not Hayes compatible is asking for trouble.

- Speed and communication standards. Currently the most common modem speed is 2400 bps but high speed modems (those operating at speeds of 9600 bps or more) are quickly becoming very popular (thanks to special System Operator deals offered by companies like US Robotics). High speed modems have built-in error correction and data compression. Different brands of modems use different standards. A dual

standard modem can handle more than one standard, making it possible to communicate at high speeds with a greater variety of modems.

- Modem cable. The modem cable connects the 25-pin modem port to the 8-pin Macintosh serial port. There are two types of modem cables available for Macintosh computers: a standard cable and a hardware handshaking cable. The hardware handshaking cable differs from the standard cable in that it is correctly wired to the flow control pin. This allows your system to take full advantage of the speed capabilities of high speed modems. Note that not all BBS programs for the Macintosh support hardware handshaking.

DEDICATED PHONE LINE

The last ingredient for your BBS is a dedicated phone line to accept the incoming calls. A normal residential telephone line service will do. But there

MACINTOSH AND AUTHORIZED APPLE DEALER INFORMATION:

Apple Computer, Inc.
20525 Marianin Avenue
Cupertino, CA 95014
800/776-2333

Preowned Electronics
205 Burlington Road
Bedford, MA 01730
800/274-5343

are a couple of things to note. The telephone company may offer you a special data line service assuring you that you will have a "clean" telephone line. This line is not substantially different from a normal line and almost no bulletin boards use this option. You also should avoid "call waiting" service. This will interrupt a data transmission if you receive a call while someone is on the line. One option you might consider if it is offered in your area - totally measured service. This gives you a much less expensive monthly charge but you are billed for local calls - usually at about two cents per minute. Most bulletin boards make relatively few outgoing calls and so this might save a few dollars.

SOFTWARE

Software is the next consideration. There are three types to consider: system, BBS, and utility software.

SYSTEM SOFTWARE

System software provides the basic instructions your computer needs to do anything at all. These days, Macintosh owners have two options: System 6 and System 7.

- **System 6.** System 6 has several benefits over System 7. First, it requires less RAM, reducing hardware costs. System 6 is also compatible with almost every existing software application. Multitasking is still available with MultiFinder, which has a lower memory price tag than the built-in multitasking of System 7. Finally, some people claim that System 6 is faster than System 7 in

performing certain tasks because it doesn't carry the overhead of TrueType fonts.

- **System 7.** The additional features of System 7 make it popular among people who have plenty of RAM to spare. In addition, it includes Apple's Communications Toolbox, which is required by some BBS software (like Hermes); this would have to be installed in a System 6 system if required.

By the way, System 7 (and all System software) is available for free or a nominal charge from online services and Macintosh user's groups. The price charged by Apple dealers or mail order houses includes manuals and Apple-issued disks. Inexpensive third party books can easily take the place of these manuals, saving you \$75 or more.

BBS SOFTWARE

The most important software decision you'll have to make when setting up a BBS is the BBS software. Not only is there a considerable expense involved (\$75 to \$199 for most packages), but there's a great deal of time and effort involved when setting up a BBS. If you decide three months down the road to

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Evanston, WY 82930
800-257-1666

Microtech International, Inc.
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East Haven, CT 06512
800/626-4276

Peripheral Land, Inc.
47421 Bayside Parkway
Freemont, CA 94538
800/288-8754

SuperMac Technology
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Sunnyvale, CA 94086
800/624-8999

MODEMS

Hayes Microcomputer Products, Inc.
P.O. Box 105203
Atlanta, GA 30348
404/441-1617

Prometheus Products, Inc.
7225 SW Bonita
Tigard, OR 97223
503/624-0571

U.S. Robotics, Inc.
(ask about special SysOp offer!)
8100 North McCormick Boulevard
Skokie, IL 60076
800/DIAL-USR

MAC CABLES:

System Connection
1123 South State Street
Oren, UT 84058
800/877-1985

switch packages, you'll have to reinvest hard cash and throw away just about all the work you've done with the previous package.

Before purchasing a package, call a few BBSs that use it. Get an idea of what you like and don't like from the caller's point of view. Then send a private message to the System Operator and ask him what he likes or dislikes about the package. As you'll see, being a System Operator is hard work. You'll want a package that makes it as easy as possible for you to maintain your system and keep your callers happy.

Here is a summary of the features of the five most popular BBS software packages. Each package has its own strengths and weaknesses. There is no best package -- your needs define what might be best for you.

- **Second Sight v2.1.** Originally written by Scott Watson of the FreeSoft Company as a host component to Red Ryder, Second Sight is still referred to by many people as Red Ryder Host. It is a BBS construction set that includes the editing tools and BBS engine needed to build and use a userlog, menus, message areas, and file sections. Second Sight's

SAMPLE LIST OF BBSs RUNNING ON MACINTOSHES

BBS TITLE	PHONE	SYSOP	SOFTWARE
The Dragon's Cave BBS.....	201/228-4708	Ralph Merritt.....	Second Sight, System 7.0, BBS in a Box
The Rock Pile BBS	201/387-9232	Tom Heffernan.....	Mansion, System 6.0.5
The Electronic Pen BBS	201/767-6337	Maria Langer	Second Sight, System 7.0
The Lyceum	205/826-9205	Mike Taylor	Hermes v1.7, System 7.0
Glassell Park BBS	213/254-4852	Pete Johnson	First Class, BBS in a Box
The PAMMUG BBS.....	215/635-0664	Noam Freedman	Hermes, System 7.0
Starline	215/635-2341	Jason Ehrlich	First Class
Sunshine Online Service	305/378-6828	Louis Oaken.....	Second Sight, System 6.0.5, MultiFinder
Galaxia!	315/695-4436	Chris Zarrara	Second Sight, System 7.0.1, BBS in a Box
Sunnydale Fido Connection.....	408/738-1119	Mike Steiner	Second Sight, System 7.0
CRABBS	410/553-6929	Bill Arndt.....	Second Sight, System 6.0.3
Dear Theophilus BBS	510/275-9759	Mark Spaulding	Second Sight, System 7.0, BBS in a Box
Currents!	513/253-2476	Randy Brown	Hermes, System 7.0
Wonderland.....	519/672-7661	Erik Sea	Second Sight, System 7.0.1, BBS in a Box
5th Dimension BBS.....	55-83-583384	Faustino Cantu.....	Hermes, System 7.0
AMUG	602/926-4026	Michael Bean	Telefinder, BBS in a Box
The Tiger's Den	602/996-0078	John Gillett	Second Sight, System 7.0.1
MacRefuge BBS	612/426-6687	Scott Christensen.....	Second Sight, System 6.0.8, Finder
4th Dimension BBS.....	617/494-0565	Zeff Wheelock	Mansion, System 7.0
Graphics Factory.....	617/849-0347	Noel Gouveia	Second Sight, System 7.0
The Macintosh Network	703/264-1104	Garner Miller	Mansion, System 6.0.7, MultiFinder 6.1.b9
MacAttack	714/793-2232	Mike Marshburn	Hermes, System 6.0.4
Valhalla.....	714/793-8831	Bruce Selzler.....	Second Sight, System 6.0.5
Scorpion	719/637-1458	Chriss Koch.....	Second Sight, System 7.0, BBS in a Box
ShadowMacs	802/425-2332	Jason Hyerstay	Second Sight, System 7.0

caller security levels are very flexible. The menus that appear as part of its command line interface are fully customizable so no two Second Sight BBSs will look the same. It supports local public and private local messages as well as message threading. FidoNet compatible network mail can be added with the addition of several software utilities for importing and exporting messages. It stores all messages in three files: MESSAGES (message area configuration information), MSGHDR (message headers), and MSGTXT (message body text). This system tends to make Second Sight a bit sluggish when dealing with over 2,000 messages online. Second Sight offers the ability to store a great deal of information for each file in its file sections, including a description of up to 10 lines. It includes survey commands that make validation questionnaires and voting surveys possible, although not very easy to create. It can support multiple phone lines using multiple copies of the program under MultiFinder or System 7. A large num-

ber of third party utilities are available to help automate and ease system maintenance.

Second Sight v2.2, which is currently being beta tested, will improve and add features to the package. Reportedly, one of the improvements will be in the access time needed to search for messages when over 2,000 are online. Unfortunately, changes in the message base and file section structures will render many popular third party utilities inoperable, creating a need for revisions across the board.

- **Mansion v8.8.** Written by Michael Pester of Software Designs, Mansion is another very popular BBS software package. It offers a great deal of flexibility to give the command line interface of each Mansion BBS an individual look. Rather than utilizing special file editing utilities, Mansion is mainly text-file based; text files are used for the menus, messages, and file sections. It supports local and FidoNet

compatible network public and private messages as well as file attach capabilities for local private mail. It stores each message in a separate file which can be quickly accessed by the software no matter how many messages are online. Although it only allows one-line descriptions for each file in a file section, it does enable the System Operator or uploader to specify keywords for file searching. Mansion does not support multiple phone lines. Mansion's powerful and extensive scripting language stretches the limits of its normal capabilities. It can automatically enforce upload/download ratios. A number of third party utilities and sample scripts are available to help automate and ease system maintenance.

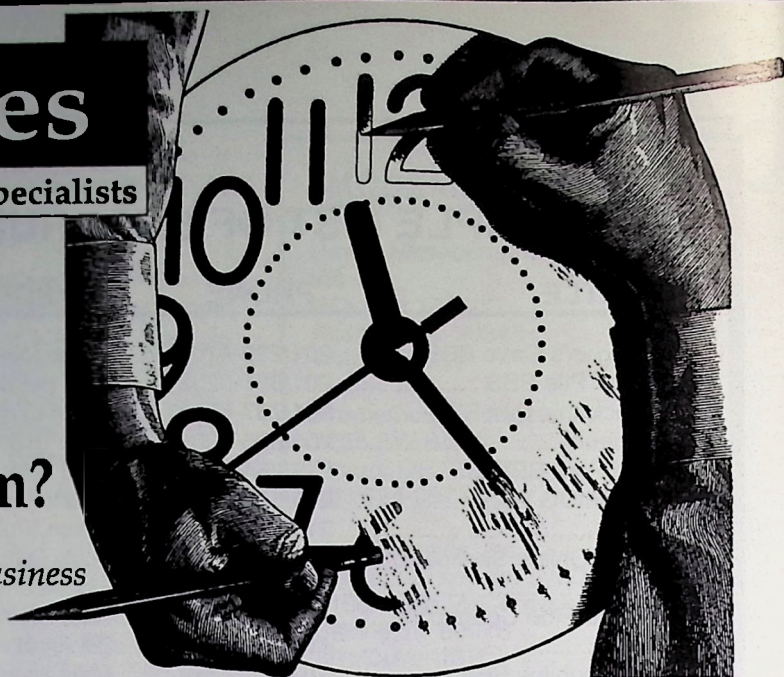
Mansion 9, a complete rewrite of the Mansion package which is currently under development, will introduce a graphic user interface (GUI) and utilize components of the Communications Toolbox. According to the developer, the new interface will closely resemble

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TBBS/TDBS SYSTEM ENHANCEMENT SOFTWARE

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User Manager for TDBS systems is a full membership registration and tracking system that creates a true member data base. Its capabilities include keyword search and on-line user resumes to allow users to share information about themselves, a note pad to let you keep notes on individual users, membership tracking and expiration date notification, automatic changes in user access as users join as members or memberships expire, etc. Users can join as members or renew their membership using credit cards on-line. And User Manager now has several additional modules, such as a small on-line sales module, a user reminder module and a software update module. The program is priced at \$69.95.

User Manager - Software Module

An all new program that works with the User Manager to automate the updates of software to customers. You enter the user registration of software sales and any time you upload a new version of the software it will automatically present the updates to customers registered for that software package and give them the prompt to download it. This package also tracks all sales and prints reports on sale by customer or by software package, and by whatever time period you specify. Designed to reduce or eliminate the time and expense invested in updating software by mail. Please call for more information and price.

Sales Manager

The powerful and productive On-Line Sales Manager. This on-line catalog sales program is written by Jeff Johnson, another pioneer in TDBS software, and it easily shows the power and capabilities of TBBS and TDBS. The Sales Manager will display a catalog of items for sale under categories you specify, each item can have a full descriptive text file attached to it and the user can place an order at any time and continue to browse through the catalog. When done the user selects to order and is presented with each item and given the opportunity to indicate how many are to be shipped. Developed as a modular package this software will handle everything from a low level order entry system to a fully featured point-of-sale package and do all the things you would expect of a full sales package. Please come and work with it on-line. This program is priced at only \$395.00.

Connex - The Connection Exchange

Connex is a professionally-based biographical, friendship, and matchmaking program designed to be used with TBBS and the TDBS option module. It allows members of your BBS to enter their own unique personal attributes, personality profile, and free-form interview. Upon completion of the user's profile and interview, Connex allows the user to make detailed selections, based on the user's own preferences. Over 350 man-hours in research and production, based on such works as Freud, Jung, and other psychological professionals, were required to create Connex and it is the most comprehensive software of its type available. Connex is complete with three databases, a biblical quote database, a gay oriented quote database or the original database. This program is priced at \$139.95.

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SECOND SIGHT

Attn: Scott Watson
The FreeSoft Company
150 Hickory Drive
Beaver Falls, PA 15010
Voice: 412/846-2700
Macalot BBS 412/846-5312
GEne RoundTable: FREESOF
FidoNet conference: RRRH
Price: \$135

MANSION

Attn: Michael Pester
Software Design
P.O. Box 12016
Des Moines, IA 50312-2016
Voice: 515/276-9650
The Mole Hole BBS: 515/279-6769
FidoNet conference: MANSION
Price: \$130

TELEFINDER

Attn: Rusty Tucker
Spider Island Software
2700 Irvine Boulevard, #105347
Irvine, CA 92720
Voice: 714/669-9260
Spider Island BBS: 714/730-5785
America Online: SpiderIsa
AppleLink: D4955
CompuServe: 73457,2756
Price: various user/phone line configurations starting at \$199

FIRST CLASS

SoftArc, Inc.
805 Middlefield Road, Suite 102
Scarborough, Ontario
CANADA M1V 2T9
Voice: 416/299-4723
SoftArc Online BBS: 416/609-2250
Price: various user/phone line configurations starting at \$195

HERMES

Attn: Frank Price
AOC Software
612 Doheny Road
Beverly Hills, CA 90210
Hermes Support BBS
213/275-6975
CompuServe: 74156/1307
FidoNet conference: HERMES
Price: \$75 keyware, available on many online services and Macintosh BBSs

MAC UTILITY SOFTWARE

SAM

Symantec Corp.
10201 Torre Avenue
Cupertino, CA 95014
800/441-7234
Price: \$100

DISINFECTANT

John Norstad
Academic Computing and Network Services
Northwestern University
2129 Sheridan Road
Evanston, IL 60208
AppleLink: a0173
America Online: JNorstad
CompuServe: 76666,573
Price: Freeware; do not contact author to obtain product

PYRO!

Fifth Generation Systems, Inc.
10049 North Reiger Road
Baton Rouge, LA 70809
800/873-4384
Price: \$40

AFTER DARK

Berkley Systems, Inc.
1700 Shattuck Avenue
Berkeley, CA 94709
415/540-5536
Price: \$40

STUFFIT CLASSIC STUFFIT DELUXE

Aladdin Systems, Inc.
Deer Park Center, Suite 23A
Aptos, CA 95003
408/685-9175
Price: \$25 shareware (Stuffit Classic), \$100 (Stuffit Deluxe)

COMPACT PRO

(formerly Compactor)
Bill Goodman
Cyclos
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San Francisco, CA 94131-0417
Price: \$25 shareware

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MacConnection
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Mac Warehouse
800/255-6227

the Finder. This is a major product revision that may result in a renaming of Mansion. It should be available by March 1992.

- TeleFinder Group Edition Host v2.4.

By Spider Island Software, TeleFinder is a multi-line GUI BBS package with versions to support up to twenty telephone lines on a single Macintosh. When accessed with regular telecommunications software, it presents a newly revamped, full featured command line interface; when accessed with TeleFinder/User software, which is freely distributable to BBS users, it presents an icon-based interface that closely resembles the Finder, right down to a trash can icon. Both interfaces are straightforward and easy to use. TeleFinder supports local public and private local messages as well as message threading. FidoNet compatible network mail can be added with the addition of several software utilities for importing and exporting messages. TeleFinder supports multiple phone lines and batch uploads and downloads. Most System Operator maintenance is down via the Finder. A demonstration version of the package is available from the developer.

- FirstClass v1.6.

FirstClass, by SoftArc, Inc., is a relative newcomer to the Macintosh BBS software market. It is also a multi-line GUI BBS package. When accessed with regular telecommunications software, it presents a command line interface; when accessed with FirstClass User software, which is freely distributable to BBS users, it presents an icon-based interface. FirstClass supports public and private local messages, as well as file attaches for private messages. Although it does not yet support FidoNet compatible network mail, this features is under development by SoftArc and third party utility developers. FirstClass supports multiple phone lines.

- Hermes v1.8.

Hermes is a keyware BBS software package by Frank Price of AOC Software, Inc. It utilizes a command line interface and depends on the Communication Toolbox to run. Hermes supports public and private local and FidoNet compatible messages. It supports message threading for local messages and allows aliases for message posting. Hermes can automatically enforce upload/download ratios. It can

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Prices and specifications are subject to change without notice.

support up to 10 phone lines. A number of third party utilities and sample scripts are available to help automate and ease system maintenance.

UTILITIES

In addition to the system and BBS software, you'll also need virus protection software, a screen saver, and file compression software.

- **Virus Protection Software.** Virus protection software will help protect your computer (and your callers' computers) from computer viruses. Two popular packages available for Macs are Symantec Antivirus for Macintosh (SAM) and Disinfectant. Both come with an INIT/Extension to check for viruses and a disinfecting application. Other virus protection software is available. No matter which you get, it's important in virus utilities to make sure you have the most recent version.

- **Screen Saver.** A screen blanker or saver will protect your screen from burn in. Don't underestimate the importance of this utility. Three popular packages include Pyro!, After Dark, and Auto-Black. Pyro! and AfterDark work as Control Panels and utilize a variety of interesting or entertaining modules. AutoBlack works differently; rename it "MacBug" (without the quotes) and put it in your system folder to make it work.

- **File Compression Utilities.** If you plan on offering files to your callers for download, you'll need one or more file compression utilities to conserve space. Three popular packages include StuffIt Classic, StuffIt Deluxe, and Compact Pro. Freeware decompression utilities are available for all these products.

To purchase any of these commercial products, try mail order houses for the best prices. Freeware and shareware products are available through most on-line services and many Macintosh BBSs.

[Maria Langer is a freelance writer, Macintosh consultant, and operator of The Electric Pen BBS - (201)767-6337 in Harrington Park, New Jersey. - Editor]

LEGALLY ON-LINE

by Lance Rose

Virginia Beach - One for the Sysops

In November, C&P Telephone, Virginia Beach's resident telephone monopoly, stepped forward to take a crack at the BBS industry. It informed 15 Virginia Beach BBS owners that they would be switched from residential to business telephone rates due to the volume of calls they received. A public hearing was also scheduled on the increase, apparently regarded by the phone company as a fait accompli.

The night of the hearing, over 200 local sysops showed up to protest the rate increase, most of them from free, hobbyist BBSs. Faced with roughly ten times the number of attendees expected, all vigorously speaking against the increase and its unfair burden on hobby BBSs, telephone company officials quickly announced they would "re-evaluate" the proposed increase.

This victory stirringly illustrates that simply by sharing information and banding together, BBS owners can achieve change and effectively protect their interests. It's only an early skirmish, of course; the war at Virginia Beach continues. However, the sysops have now marshalled their forces. With their newfound strength, numbers and organization, they plan to take the fight to the state regulatory level.

Local phone companies are not always so tractable as C&P Telephone was that night. The last issue of this magazine reviewed Southwestern Bell's war with Kansas City sysops, for instance. Some observers theorize that the telephone companies are pursuing the simple-minded strategy uniquely available to the monopolist: wear down the opposition (small fry BBS' in this case) with wave after wave of unreasonable pricing activity, which can only be countered by continuing, expensive, disciplined coordination on the part of the sysops.

Take a step back for a moment, and this whole subject of monopolistic rate hikes takes on a "what's wrong with this picture" quality. Local phone monopolies are attacking BBS' separately in various jurisdictions. The same attack, repeated in different localities, results in a national "divide and conquer" strategy against sysops. Sysops are organizing locally to respond. But is any national-level response to this overall phone company trend possible - can their rate raising activities be attacked as a whole?

Perhaps it can, by bringing the matter before Judge Green. He is the federal judge in Washington, D.C. who has presided for the past decade over the AT&T breakup. He recently (and very reluctantly) released the local phone monopolies to enter the information services business, and only because he was ordered to by a higher court that did not see evidence that these companies act monopolistically.

Well, new evidence is pouring in buckets. If sysops and BBS organizations can get together to share their experience and information, it would be possible to approach Judge Green with a plea to put the lid back on the phone monopolies, or at least make them respect the rights of others to use the phone system without constant harassment.

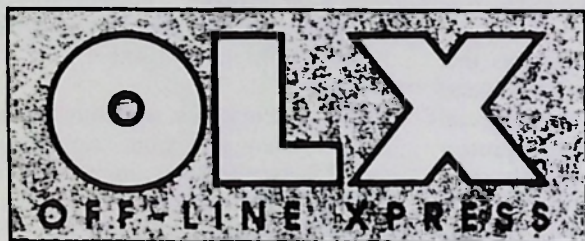
The argument to rein in the phone companies is easy. The phone rates charged to BBSs by the phone monopolies require special judicial scrutiny. This is because phone companies compete with BBSs. They are (or should be) under a special obligation to provide their monopolized resources, the phone lines, to competitors at rates that do not create an advantage for the phone companies over those competitors. Even standard business rates may not be reasonable for BBSs: business rates acceptable for the telephone operations of dry cleaners and gumball factories may create an unfair competitive advantage for the phone company when applied to BBSs.

The local character of BBS organizations gives them strength at the local level, but renders them powerless to deal with causes at the national level. We should seek to build larger, more prominent BBS groups to protect the rights of BBS' nationally.

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OLX is Off-Line Xpress. It's the reincarnation of **SLMR** (Silly Little Mail Reader), a mail reader program used by thousands of callers to read and reply to messages off-line. It can read packets generated by any **.QWK** compatible mail door program from any BBS, and generates reply packets in the **.QWK** format. **OLX** is included with all copies of **QMODEM**, and is sold separately.



Qmodem, the choice of hundreds of thousands of telecommunications experts for over 7 years, is now distributed and supported by **MSI**. The guru of **Qmodem**, John Friel, is still in control of the program code as VP of **Qmodem Research and Development** for **MSI**. He's recently added some great new features, including a **.QWK** compatible mail reader, and is working on special BBS hooks for a future release. Look for **Qmodem v.5** with **OLX** at your favorite computer dealer.



Midnight Mail, scheduled for release in the first quarter of 1992, is a robot-dialer designed to get your mail, no matter where it's located. **Midnight Mail** picks-up your messages in **.QWK** packets, and can be programmed to call almost any BBS system, **CompuServe**, **MCI**, and many additional services. It also provides BBS conference echo services to any network using the **.QWK** format, and includes **OLX** for message reading.

Mustang Software's goal is to provide a one-stop solution for your communication needs. Whether you operate a BBS or simply call one, you shouldn't have to search for the programs you need to get the job done. Check our products, support and service and see if you don't agree that **MSI** is "Bringing it all together in '92".



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A Porn Sighting in Cyberspace

More specifically, "kiddie porn", the politically sensational cousin of plain old obscenity. In early December, news reports surfaced that America On-Line, a national information service working the same market as CompuServe and Prodigy, was being used by one or more callers to transmit pornographic images of children.

This is no small accusation. Child pornography is one of the hot buttons in this country today, strictly taboo. It is also rather different from materials considered legally "obscene." Materials are judged to be obscene based on their content only - highly sexual or violent images, with no serious merit outside their appeal to the viewer's lust. In contrast, child pornography is illegal because its production is considered very likely to be connected with sexual abuse of the children used in the pictures. As a result, a picture of a child that is merely sexually suggestive may be considered child pornography, though its content may fall far short of the racy content necessary to brand the picture obscene as well.

Accordingly, the intimation that America On-Line was supporting kiddie porn transmissions amounted to saying that it indirectly contributed to child abuse. This was, if nothing else, an incipient public relations mess worthy of Prodigy (and if it happened to Prodigy instead, you would hear the nails being pounded into the coffin at the speed of light).

Subsequent reports revealed that this problem did not exactly surface by accident. An individual, one Roger Dietz, took it upon himself to seek out such images after a friend told him they could be found on America On-Line. He managed to get several images sent to his mailbox. Then, reportedly he contacted television stations and newspapers with the claim that the images were sent to him unsolicited (!?). The FBI was contacted, and began an investigation that continues as this article goes to press.

Almost immediately when the news surfaced, America On-Line issued a press release in the form of a statement by its

President, Steve Case. America On-Line confirmed that the incident occurred, and stated it was cooperating with the investigation. It also explained that it did not know about the pornographic files because it does not routinely monitor caller e-mail. It emphasized that the system supports free speech, but also warned that those who would abuse the system must "shape up or ship out."

This situation raises several interesting thoughts. First, observers generally agree (as much as they ever do) that America On-Line handled itself very well in its public statement. In one swoop, (1) it admitted immediately that a controversial incident occurred on the system, instead of sweeping the incident under the rug, (2) by pointing out that it missed the illegal transmission activities because it does not monitor e-mail, America On-Line portrayed its respect for caller privacy and free speech, while giving a perfectly acceptable explanation for its previous inaction and lack of knowledge, (3) America On-Line clearly portrayed the hierarchy of authority properly at work in this situation - government agents are charged with investigating the illegal activities and enforcing the laws, while America On-Line runs its own system and enforces its own rules.

This may or may not seem brilliant public relations to you, but it completely avoids the shooting-one's-self-in-the-foot effect often achieved by America On-Line's competitors in sensitive legal or moral situations. It helps America On-Line's customers remain comfortable with the service, at a moment when they could just as easily have been repulsed and bolted from the system never to return.

Second, this event is interesting simply by being reported at all. Pornography online is a shadowy subject. Most of the news in this area is sort of murmured under the breath, and only fleetingly reported (the online world is still waiting for its Pee Wee Herman or Clarence Thomas). A recent example is Western Washington University's administrative banning of the "alt.sex.group" and "alt.binary.pictures.erotica" newsgroups from the university's Usenet feed. This raises serious academic, censorship and 1st Amend-

ment questions, but the whole event was largely ignored outside of Usenet itself and the local Seattle newspapers.

There is, I believe, a quiet war underway against online porn, and it should be taken seriously. Especially by those who run BBS' openly acknowledged to carry very racy materials. The America On-Line affair represents a very public sighting, and may substantially increase social awareness and concern on this issue, resulting in greater attention from law enforcement agents in the future.

Third, this situation carries overtones reminiscent of the Cubby v. CompuServe case, discussed in this column last issue. A federal court in Manhattan held that CompuServe was not responsible for defamatory statements in an electronic newsletter publicly available to CompuServe callers. The reasoning was that CompuServe serves a valuable 1st Amendment role by distributing the speech of others. That role would be seriously compromised if CompuServe became responsible for all of the statements made by others on its system.

Similar reasoning should apply to America On-Line here. Whatever the results of the FBI investigation turn out to be, America On-Line ought not find itself subject to legal penalties for unknowingly carrying other's illegal e-mail. America On-Line performs a valuable 1st Amendment function by delivering large volumes of unmonitored e-mail between users, as well as public postings and files of all kinds. If America On-Line is held absolutely responsible for kiddie porn on its system, it would be forced to monitor e-mail to prevent future criminal convictions. Such monitoring would burden America On-Line's daily operations of distributing others' speech. It would also chill the flow of perfectly legitimate caller e-mail, since many callers would likely refuse to send as much e-mail when they know they are being closely watched.

It looks like Prodigy, CompuServe, GENie, and now America On-Line are acting as ongoing testing grounds for some of the most important BBS legal issues. It's a nice kind of reversal, where big businesses blaze the way on critical legal issues and help make things safe for the small BBS.



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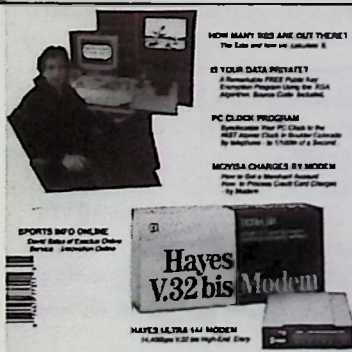
You can place the news gleaned from Gannett publication's journalists at the keyboard of your callers each AM. Available by 5:00 AM Mountain Time each Business day, USATODAY can be downloaded from our multiline information service or file requested from our multiline mail system using your U.S. Robotics HST 9600 bps or V.32 modem at 9600 bps or higher - normally less than a one minute connection. And maintenance of this product is so simple to automate, you don't even need to get out of bed. Best of all, USA TODAY needs no introduction or explanation. It has the name recognition to instantly draw new callers to your system. Put THE most popular daily national newspaper in the world on your electronic bulletin board for as little as \$25 per month.

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MAGAZINE

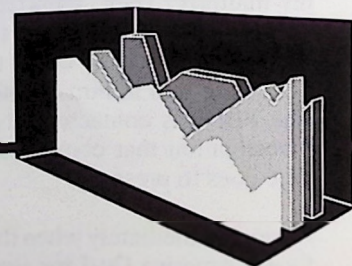


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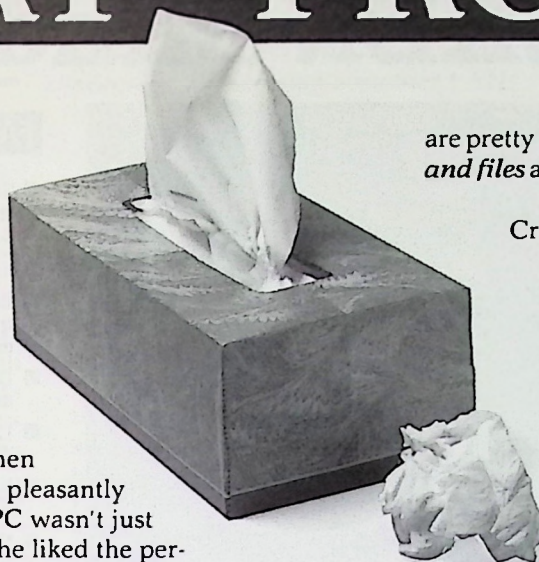
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Short Bursts

- The House Gov't. Operations Committee of Congress has set up a "Whistleblower's BBS" at (202)225-5527. It's stated purpose is to enable people to "share information with the Congress to prevent fraud, waste and abuse in government." Callers are "guaranteed anonymity" through the use of pseudonyms, and the assurance that only the sysops see callers' messages.

Those whose concerns are not fully answered by this assurance are also told, "There is no Caller-ID service on the bulletin board's incoming line. Incoming calls are not traced. Each caller must consider the possibility that a call to this board is being recorded or traced at the source of the call." This paradoxical statement may slightly reduce paranoia about the BBS, but it also makes you wonder what that guy with the cap on the telephone pole down the block is really doing.

It's not a real social place. There are no public message areas, and no file download. Just drop off your dirty laundry and leave.

Will this bring on a new era of cleaning up all the scandal in government? Will the next woman-abusing government official be caught red-handed? Will this BBS last longer than a fortnight? We will see...

- As we go to press, it appears the government has staged yet another set of anti-hacker raids, seizing equipment, refusing to unseal the warrants, etc. Wags are calling this latest action "Winterdevil", a reference to the "Project Sundevil" anti-hacking raids of last year.

First indications are not encouraging. It seems, at least at this early stage, that law enforcement agents were once again unable to discriminate between the files they wanted, the hard drives on which those files reside, and the computer systems containing those drives. They just took the whole box. Kinda

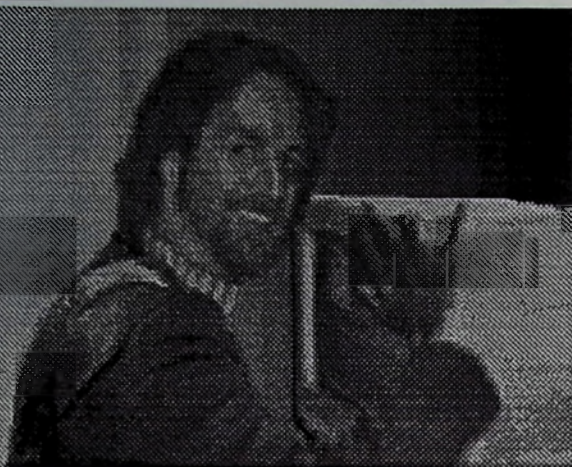
makes you wonder how much louder the Electronic Frontier Foundation has to holler about online civil rights - they're already blue in the face.

More news on this is sure to arrive shortly.

[Lance Rose is an attorney practicing high-tech, computer and intellectual property law in New York City, and is available on the Internet at el-rose@well.sf.ca.us and on Compu-Serve at 72230,2044. He works with shareware publishers, software authors, system operators, technology buyers, interactive media developers, on-line database services and others in the high technology area. He is currently revising the book SYSLAW, a legal guide for bulletin board system operators, due to be published early 1992. - Editor]

The FALKEN Mind Meld.

"I was very pleased to learn that all claims were true and to-the-point."



FALKEN 6.0 System Profile: THE FINAL FRONTIER BBS

System: The Final Frontier	Location: Hanford, California	Protocol: 8-bits, no parity
Sysop: "SysOp Robert"	Phone No: 209-584-6417	Hardware: 386 - 25MHz PC
	No./Lines: 8	Software: Falken 6.0
	Baud Rate: 300/1200/2400	

"I've been 'computing' for over 11 years, and since I was bitten by the 'BBS bug', about 7 years ago, I have dabbled, as a member of other small BBS's.

"Once the decision was made to begin my own, I started with a small Commodore, single-line system, and was QUICKLY introduced to the woes and worries of being a SysOp.

"Having a life-long dream to operate a multi-line system, seemed as if it would only remain just that... a dream, since the cost and equipment necessary was astronomical.

"A friend read a small ad that he discovered in the trade mags, about a new, and inexpensive Multi-Line BBS system that was just becoming available, and at a VERY reasonable cost. So, with that in mind, I began to research the cost of obtaining the hardware. Since Falken appeared to be VERY flexible, I was able to begin my new 'multi-line dream' with as few as 2 phone lines, and at a fraction of what I had originally been told the startup costs would be for OTHER multi-line systems.

"Having spent my life strictly as an Apple and Commodore 'compute', I was somewhat reluctant to take such a bold dive into the IBM/clone realm, but decided to take the chance anyway, ESPECIALLY after having spoken to the marketing representative for Falken (Jeffery Coons), and learning the Falken software was straight-forward, and easy to install and configured. So, onward and upward I went...

"I was VERY pleased to learn that all claims were indeed true and to the point. Falken was QUITE EASY to install and setup to any system configuration my heart, (or ego) desired. Having been a loyal Star Trek fan most of my life, the 'Theme' for my BBS is 'The Final Frontier'.

"Falken allowed me to configure my BBS to match and elaborate on my chosen theme. The menus were easy to design, using any of a number of readily available ANSI editors. And custom messages were also a snap to make.

"During my relationship with Falken, I have had no problems obtaining help with problems, be they SysOp related, hardware, or software. (many a time, I have contacted the BBS programmer and discovered that I simply AND'ed when I should have OR'ed, (so to speak). I have always been met with a great deal of patience, and understanding. And have always found them generous with their time and information.

"Now, with the advent of Falken 6.0, I personally know of many, many new 'doors' programs in the works. Which will be SURE to add to Falken's versatility.

"All-in-all, Falken has been a life-long dream come true for me. I've been able to establish a VERY successful BBS, and can rest assured that any and all problems will be quickly and professionally handled."

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- ☐ Falken 6.0 2-line demo (\$25)
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 - 5.25" 1.2M (1 disk)
 - 3.5" 720K (2 disks)
- ☐ Falken 6.0 BBS Software
 - 2-line (\$99)
 - 4-line (\$199)
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FALKEN 6.0 Features

- Supports up to 16 lines plus a local login channel.
- Compatible with the FOSSIL standard for interfacing the serial ports.
- Built-in multitasking environment breaks the 640K barrier. *Falken* uses expanded memory so that it will even operate on XT-class PCs.
- Doors which allow external applications to be developed.
- Link teleconferences with other *Falken* systems to create SUPER teleconferences.
- Sysops can dial-out while *Falken* is on-line supporting other users.
- Fully configurable menus to create the desired 'look-and-feel' of the system.
- Customize your menus and screens for both ANSI and ASCII users.
- DOS Shell, written specifically to be used with FOSSIL drivers, can be used either locally or remotely. It can be used to copy, delete, rename, type, dump, list, or locate files.
- Utilities included to automate maintenance, billing, monitoring and other functions.
- E-Mail with distribution lists.
- Attach File to E-Mail to be downloaded when the letter is read by the recipient.
- Message Base uses threaded responses.
- Full Screen Editor uses ANSI codes to manipulate text on the screen.
- Global Commands include: .who, .user, .userlist, .time, .logoff, .send, .kill, .extend (allows a sysop to give a user 10 extra minutes on their session).
- The Ymodem, Zmodem, and Xmodem protocols use the FOSSIL interface to the I/O ports. Source code for all protocols is available.

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4-Line \$199	16-Line ... \$399

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The 2-line version of *Falken 6.0* is available as Shareware. To download *Falken* or to see the system in action, call our BBS at 703-803-8000 (USR/HST), local access on PCPusuit node DCWAS or Tymnet node 0476.

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INTERNET NEWS

INTERNET COMMERCIALIZATION UNDERWAY

Traffic on the Internet has risen from **5 billion** packets in October 1990 to **11 billion** in October of 1991 and it's still accelerating. One recent survey estimates there are now over **535,000** attached hosts in **33** countries. Most of the growth of Internet has occurred during the past three years during the course of the current NSFNet backbone contract - originally let for **\$5 million** to Automated Network Services. This may represent one of the most highly leveraged investments of Federal funds in history.

And there is more to come. The House and Senate reached accord on the **National High Performance Computing Act** during the last week of November and President George Bush signed this bill into law during the second week of December. This bill was originally introduced by Senator Albert Gore of Tennessee as the **National Research and Education Network (NREN)** proposal. The final bill calls for infusion of **\$318 million** in 1992 and an eventual **\$602.8 million** per year by 1996 to fund a gigabit-per-second data network essentially replacing the Internet's NSFNet backbone. And a couple of surprises were included. The contract to administer the backbone will not be awarded to a single contractor as it is now, but divided between two contractors in an effort to spur competition. Further, the NSFNet is no longer tasked with managing the network contracts. What federal agency actually oversees the network was left up to the President in the final bill.

The federal funding is actually the tip of the iceberg. With firm funds committed to build the network, hundreds of companies, Universities, and research entities are expected to pour development and product onto the fire. The government's largesse is expected to comprise less than **10%** of the total investment eventually.

U.S. West has just committed **\$300 million** to their Advanced Communications Services business unit. One of the priorities - connecting customer LANs to the Internet - initially in 14 cities.

A lot of the debate over the commercialization of the Internet is becoming a mute point. Advanced Network and Services, the MCI/IBM/Merit partnership that currently operates the NSFNet backbone, has signed the commercial database service company DIALOG up as a customer. This is probably initially to allow DIALOG customers the possibility of an Internet e-mail connection, but the concept of paid access to DIALOG's many commercial database services over Internet has to be a subject of conversation.

And in the final week of November, the CEOs of a dozen leading U.S. computer companies comprising a group called the **Computer Systems Policy Project (CSPP)** asked the Bush administration to revise its thinking concerning the National Education and Research Network (NREN) to include support of distributed computing and commercial applications. In a meeting with Budget Director Richard Darman, the group expressed their concern that the High Performance Computing and Communications Initiative puts too much emphasis on research and ignores business needs. They urged the administration to put more resource into software development and to reexamine the priorities to design NREN to include a nationwide consumer and commercial network. The group includes Apple Computer, AT&T, Data General, Digital Equipment Corporation, Hewlett-Packard Company, IBM, and Sun Microsystems Inc.

And an increasing number of people within Internet circles are worried over the position IBM seems intent on occupying within the forum of the new network. The non-profit Automated Network and Services (ANS) subsidiary formed by IBM and MCI has now formed a for-profit subsidiary to sell commercial access to the Internet. And ANS seems to be the biggest winner in the NREN sweepstakes. Competitors are infuriated that it appears the federal government is going to spend millions of dollars to build an network as a gift to IBM. If our sources within IBM are correct - they have reason to be.

THE ELECTRONIC FRONTIER FOUNDATION'S FIRST ANNUAL ONLINE PIONEER AWARDS - CALL FOR NOMINATIONS

In every field of human endeavor, there are those dedicated to expanding knowledge, freedom, efficiency and utility. Along the electronic frontier, this is especially true. To recognize this, the Electronic Frontier Foundation has established the Pioneer Awards. The first annual Pioneer Awards will be given at the Second Annual Computers, Freedom, and Privacy Conference in Washington, D.C. in March of 1992.

All valid nominations will be reviewed by a panel of outside judges chosen for their knowledge of computer-based communications and the technical, legal, and social issues involved in networking.

There are no specific categories for the Pioneer Awards, but the following guidelines apply:

1. The nominees must have made a substantial contribution to the health, growth, accessibility, or freedom of computer-based communications.
2. The contribution may be technical, social, economic or cultural.
3. Nominations may be of individuals, systems, or organizations in the private or public sectors.
4. Nominations are open to all, and you may nominate more than one recipient. You may nominate yourself or your organization.
5. All nominations, to be valid, must contain your reasons, however brief, on why you are nominating the individual or organization, along with a means of contacting the nominee, and your own contact number. No anonymous nominations will be allowed.
6. Every person or organization, with the single exception of EFF staff members, are eligible for Pioneer Awards.

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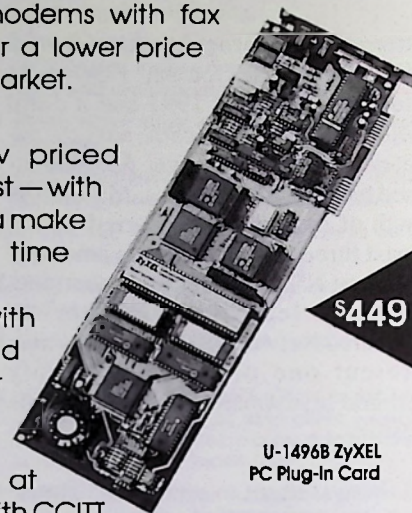
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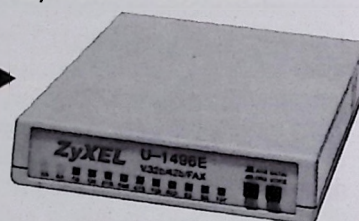
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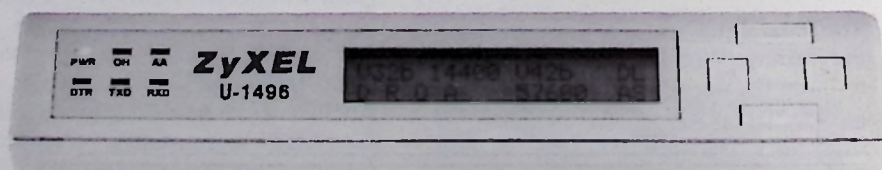
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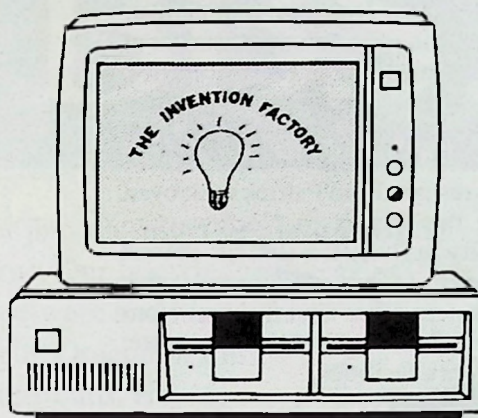
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You may nominate as many as you wish, but please use one form per nomination. You may return the forms to us via email at: pioneer@eff.org. You may mail them to us at: Pioneer Awards, EFF, 155 Second St., Cambridge MA 02141. You may FAX them to us at: (617) 864-0866.

Just tell us the name of the nominee, the phone number or email address at which the nominee can be reached, and, most important, why you feel the nominee deserves the award. You can attach supporting documentation. Please include your own name, address, and phone number.

We're looking for the Pioneers of the Electronic Frontier that have made and are making a difference. Thanks for helping us find them,

The Electronic Frontier Foundation

INTERNET USER'S GUIDE AVAILABLE

Internet offers unprecedented power and scope to the individual at a terminal. You can connect to systems in 33 nations from a keyboard more or less instantaneously and at little or no charge and access truckloads of information, both esoteric and useful, interesting or dull, depending on your own interests and needs. The problem with all that access is that to reach any particular service, you must know specifically how to do so. There is actually a wealth of documentation on how to use Internet on the Internet itself. But it tends to be buried in electronic files scattered hither and yon on systems all over the country. There is no real handbook for beginners on using the Internet and getting started.

NYSERNet has announced release of the *New User's Guide to Useful and Unique Resources on the Internet*, a project of the NYSERNet K-12 Networking Interest Group and the NYSERNet/NYS Library Networking Interest Group for Libraries.

The printed book is neither exhaustive in coverage nor does it really provide a good introduction to what Internet is and how to use it. But it does list about fifty of the more popular online library catalogs, bulletin boards, ftp archives, and services available on the Internet. This gives new Internet users a pretty good start on the way to exploring the Internet. The book was compiled and edited by Mr. Andrew Perry, Assistant Director of Librarians for Systems Management at the State University of New York at Binghamton. Available at \$25. *New User's Guide*, NYSERNet, Inc., 111 College Place, Syracuse, NY 13244

THE TELECOM DIGEST

by Julia L. Wilkinson

You say you don't get enough e-mail? There's a remedy for that. Subscribe to the **TELECOM Digest** and you'll get more e-mail than you do bills in your conventional mailbox.

The **TELECOM Digest** is an Internet mailing list, although some may know it as the Usenet Newsgroup

comp.dcom.telecom, and comprises an electronic publication covering telephone issues. Patrick Townson, the Digest's moderator, notes the distinction between these terms has become more and more blurred over the past few years.

TELECOM Digest was founded in August, 1981 by Jon Solomon, then an employee in the computer department at Rutgers University. He published Digest for several years at his various places of employment including MIT and Boston University. In the fall of 1988 he resigned and Patrick took over, moving the Digest to Northwestern University in Evanston Illinois. Patrick says he has "no affiliation with Northwestern other than their generous allowance for the use of their computer and network facilities."

"When the Digest started in 1981 it was by and large a technical publication, but over the years it became much harder to separate the technical stuff from the political issues involved in telecom," says Patrick. The main focus of the Digest is the technical aspects of voice telephony. "But it touches on all aspects of the telephone service, including long distance, cellular phones, and more," says Patrick. The "more" includes political and social issues and discussion involving telephones and the telephone companies.

One of the hottest topics in the Telecom Digest over the years was the relationship between privacy and the phone (for instance, the privacy limitations imposed by the advent of Caller ID) - so much so that a separate publication, the "Telecom Privacy Digest," was started to alleviate the load. (To subscribe to the Telecom Privacy Digest, send e-mail to **telecom**

-priv-request@pica.army.mil. Back issues are available via anonymous ftp on **caesar.pica.army.mil**. Login - **guest** and password = your_email_address; cd to the **telecom** directory).

However, privacy issues still proliferate in the TELECOM Digest; a recent thread covers telemarketers and how to deal with them - the overwhelming consensus being that they are obnoxious and need to be stopped. You can obtain useful tips from the members to this end, including the technique cited in a recent

article wherein a couple changed their answering machine message to ward off such intruders. Another suggested telling the salesperson to wait just a moment until you got the door...and then leaving them hanging (hopefully up).

Similarly, heated controversy over hacking and phreaking eventually got their own spinoff: the **Computer Underground Digest (CUD)**. CUD describes itself as "a forum for the discussion of legal, ethical, social, and other issues regarding computerized information and communications. A recent article detailed a sample notice to law enforcement agents for BBS owners, citing the First Amendment and certain laws that protect the BBS from seizure without a warrant specific to each person's e-mail.

To subscribe to CUD mailing list, send mail to **tk0jut1.mvs.cso.niu.edu**. You can also read CUD in the Usenet Newsgroup **alt.society.cu-digest**. CUD issues are available on CompuServe in DL0 and DL4 of the IBMBBS SIG, DL1 of LAWSIG, and DL0 and DL12 of TELECOM, on GENie, on the PC-EXEC BBS at (414)789-4210, and by

anonymous ftp from **ftp.cs.widener.edu** (147.31.254.132), **chsun1.spc.uchicago.edu**, and **ftp.ee.mu.oz.au**. To use the University of Chicago mail server, send mail with the subject **help** to **archive-server@chsun1.spc.uchicago.edu**

Patrick says the "TELECOM Digest is entirely written by the readers; all I do is edit for clarity, re-arrange the messages in a logical order and handle the distribution." TELECOM Digest readers submit articles on a myriad of subjects, from whether or not telephone books are copyrighted to generating fake out-of-service messages. There is the occasional interesting factoid such as the eye doctor who included "2020" in his phone number. Patrick receives about 100 messages per day, but after sorting them out is left with about 30-50 messages. These are distributed in 3-4 issues of the Digest, "generally every few hours around the clock." Fortunately for him, most of the work is automated once he selects those messages to be used.

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He does add messages of his own occasionally. "Although my title is Moderator, I am more of an editor and facilitator," he says. "Moderator" is a Usenet term, and while I do function as the **comp.dcom.telecom** moderator, it is by default, with my main interest being the list-maintainer/editor/facilitator for TELECOM Digest.

TELECOM Digest goes out to about **55,000** readers daily, throughout the USA and many foreign countries. The mailing list has about **1000** names at this time. About **40,000** readers see the Digest in **comp.dcom.telecom** on Usenet. About **10,000** more see it on various BBS machines around the world, and these are usually Fido sites which get it sent to them through the Fido/Internet gateway.

In addition, some readers receive it at Unix sites on their own internal BBS. Patrick also sends copies to IBM, AT&T and a few telephone companies where it goes up on BBSs for employees. He sends copies to MCI Mail, AT&T Mail,

Sprint Mail, and the Telebox Mail System in Germany for redistribution to readers at those sites. There are also several Digest readers who are CompuServe users and some that access it via the Net Exchange BBS run by Telenet for PC Pursuit subscribers.

You can subscribe to the TELECOM Digest by sending mail to **telecom@eecs.nwu.edu**. Personal mail to Patrick can be sent to: **ptownson@eecs.nwu.edu**.

New subscribers to the Digest receive a Welcome message with information on the history of the Digest and how to obtain archives of past issues. There is also a list of answers to frequently asked questions ("FAQs") such as "How do phones work?," "What happens when all the telephone numbers run out?," "What is Bellcore?," "How can I prevent the call waiting tone from beeping in mid-conversation?" and "How can I get specifications on how Caller ID service works?"

If you want to explore the back issues, you can rummage through the Telecom Archives. You can use anonymous ftp to login there:

ftp lcs.mit.edu
login: anonymous
password: (your e-mail address)
cd telecom-archives

In addition to ten years of back issues of the Digest, there are numerous files of interest relating to telephones and communications.

[You may contact Julia Wilkinson at **julia@aol.com** - editor]

EUDORA: A FRIENDLY E-MAIL INTERFACE FOR YOUR MAC

by Jacob Allan

Before **Eudora**, Macintosh users were forced to learn endless cryptic commands to use electronic mail on UNIX and VAX computers. Many users don't bother learning the non Mac-like commands and set aside electronic mail as not very useful. Now, sending and receiving electronic mail from your Mac is quick and easy using a program called **Eudora**.

The advantage of **Eudora** is the freedom to use the standard Mac text-editing tools in the Edit Menu. With **Eudora**'s point and click flexibility, you can delete, cut, copy, and paste words or lines in your mail message. Forwarding messages or replying to messages is as simple as selecting an option from the Message Menu. You can also easily create mailboxes, like folders, to file your message.

WHAT YOU WILL NEED TO RUN EUDORA

Account on an Internet host computer with a POP3 server.

Either an Ethernet card, an AppleTalk to IP gateway, or a modem to physically make the connection to your host.

MacTCP for network connection or The Macintosh Communications Toolbox (built into System 7!) for a modem connection.

System 6.0.4 or newer operating system software.

Eudora program.

Eudora is available via anonymous FTP from `ux1.cso.uiuc.edu` in the directory `/mac/eudora`.

SENDING MESSAGES WITH EUDORA

To send an electronic mail message, select **New Message** from the Message Menu. Simply, point and click after "To:" and type the recipient's address. Press tab or point and click to position the cursor in the next field. (Notice that **Eudora** automatically enters your POP

account address that you set using the Configuration option found in the Special Menu.)

In the next three fields you may enter the brief subject of the message, the addresses of users you want to receive a carbon copy (Cc), and the addresses of the users you want to receive a blind carbon copy (Bcc) of your message.

The difference between Cc and Bcc is that the recipient will know from the message header who has received a Cc but not who has received a Bcc.

In the final field, **X-Attachments**, you can specify Mac documents to send along with the message. This can be done using the **Attach Document** option in the Message Menu. When you use X-Attachments, the file or files are automatically placed in a special folder called **Attachments** on the recipient's desk top.

Now, press tab or point and click to the message area and type your message. Remember, you can use the standard Mac text-editing tools in the Edit Menu. Point and click on "Send" to send your message.

RECEIVING MESSAGES WITH EUDORA

Receiving messages is as easy as launching **Eudora**, selecting the Check Mail option from the Edit Menu, and typing in your password. **Eudora** automatically logs onto a server and collects all your messages and then transfers them to your Mac.

To read a new message, select **In** from the Mailbox Menu and then point and double click on a message. New messages are marked at the left with a bullet. The bullet disappears once you have read the message.

Messages can be printed by selecting **Print** from the File Menu. To delete a message, point and click on or open a message and select **Delete** from the Message Menu.

REPLYING TO MESSAGES WITH EUDORA

To reply to a message, select **Reply** in the Message Menu. **Eudora** will automatically append a copy of the message you are replying to. This message appears with carets (>) at the start of each line. (If you don't want the message appended to your reply, simply select and delete it.) Type your reply in the new window below the appended text or anywhere you like. It's easy to reply to questions or statements since you can start typing anywhere in the appended text by simply positioning the cursor. Click the "Send" button to send your message.

REDIRECTING OR FORWARDING MESSAGES

Select the appropriate option from the Message Menu to redirected or forwarded messages. You can type a new message address over the original "To:" in the message header.

CREATING MAILBOXES

Messages can be moved from the "In" mailbox to a personalized mailbox that you create. You can have many personalized mailboxes. To create a new mailbox, select **New...** from the Mailbox Menu. A window will appear and you can name your mailbox, for example, Reports. To file incoming messages in your Reports Mailbox simply open or select the message and then select the Reports Mailbox from the Transfer Menu.

To view messages stored in a mailbox, select the mailbox from the Mailbox Menu.

FOR MORE INFORMATION

Eudora was written by Steven Dorner and is copyrighted by the University of Illinois Board of Trustees. For more information, send e-mail to `s-dorner@uiuc.edu`.

[Jacob Allan is a student at the University of California, San Diego. He is majoring in Computer Engineering. Jacob works part-time at the San Diego Supercomputer Center - Editor]

CERFNET OFFERS INTERNET RESOURCE GUIDE BY E-MAIL

The California Education and Research Network (CERFnet) has established a mail server to provide sections of the *Internet Resource Guide* to e-mail boxes of those who do not have ftp access to download the guide. To receive a file with instructions and a list of the guide's chapters and sections, send an e-mail message to info@server@nnsf.net. In the message body, enter the following three lines:

Request: resource-guide
Topic: resource-guide-help
Request: end

For those with ftp access, you may do an anonymous ftp to [nic.cerf.net](ftp://nic.cerf.net) and find the Internet Resource Guide in the */cerfnet/irg* subdirectory.

Another document of interest is the *Internet Accessible Library Catalogs and Databases*, updated in August 1991. This file is available in the subdirectory */cerfnet/cerfnet_info/library_catalog*.

THE BBS TO INTERNET CONNECTION

With the President's signature on the High Performance Computing Act, the Internet and NREN will increasingly dominate the internetworking landscape. To this point, much of the debate about implementation revolves around moving the T1, and partially T3 NSFnet backbone, currently sporting a top speed of 45 Mbps, to Gigabit per second or higher data rates. There's a lot of concern about contractors, advanced switch technology, and protocols.

But the ivory tower crowd that has formed the heart of Internet up to this point has a bit of a blind spot when it comes to two primary issues, mathematics and software interface.

With regards to interface, despite the high esteem the Unix command line has been held in academia, it is in most respects hostile territory for the human mind. The propeller heads love the power of some 300 operating system commands and an entire culture of specialized utility program add-ons. Most of the rest of the academic community is loathe to admit they don't understand anything and so view the basic Internet interface as either 1) a necessary rite of initiation/passage or 2) an unnecessary and frivolous domain populated by propeller heads.

At the other extreme, IBM stands quite ready to step into the breach and provide access to the Internet to everyone - at a true Blue price. If Prodigy is an indication of how they view networking, I'm pretty sure I don't want any. If they do manage to get the Federal government to somehow mandate an Internet monopoly for IBM, and this is starting to smell likely, we're pretty much back to square one with internetworking. I'll probably go find Bill Schrader and the propeller heads and see how they are starting all over again from scratch.

But for all the K-12 schools and the general online population that we now talk of having access to the Internet in the near future, the current interface is by all measures unacceptable. Those new to the Internet world, after seeing offline mail readers such as QMail deluxe, general mail utilities such as Norton Commander's interface for MCI Mail, or just accustomed to dealing with message databases on even the most basic bulletin boards, the Unix command line looks like an enormous and frightening leap backward. Similarly, Fidonet aficionados, accustomed to packaging hundreds of messages into a single packet, compressing the packet to a third its normal size with archive utilities, and then passing the packets with ZMODEM protocols automatically, UUCP looks a lot like a rude script program to do ASCII file transfers (not much of an exaggeration here technically I'm afraid).

The second problem has to do with mathematics. Most of those offering Internet access so far have been providing training and services to a total user population comparable to a part time RBBS single line BBS run for fun in the

evenings. Those in Internet are fond of citing usage and traffic statistics, but in reality, Fidonet alone handles very nearly the level of actual message traffic as the NSFnet backbone. And because of the rigors of training the user population to use Internet in its native form, these access providers would be hard pressed to serve a larger group. When Internet movers and shakers gratuitously discuss putting Internet in the grade school classroom, they rarely have but the vaguest concept of the numbers involved. To put ONE terminal in each school district in the United States is far removed from the goal of a terminal in each classroom. But at the school district level, we are talking about 16,000 connections. There is no organization or entity within Internet currently capable, even remotely, of dealing with that sort of population.

Both problems can be attacked from a number of directions. But while the powers that be begin to talk of "software development" and commercial access entities, electronic bulletin board systems have already begun the task and appear to be as good an interim solution as any. And perhaps more than that.

School districts for example, COULD set up a BBS in each school - access from each classroom (or student's home for that matter) and in fact network the school bulletin boards using Fido type technology to pass e-mail and Usenet newsgroups. A single system per school district could gateway Usenet Newsgroups and e-mail to these school district nets. And many BBS packages now feature "outdial" functions that would allow each school BBS to provide real time access to a limited set of library catalogs etc. to callers. But would this really accomplish Internet access?

Not completely. But a pretty good start. The Internet provides four basic services of interest to the world:

- 1. Universal personal e-mail
- 2. Usenet News Groups
- 3. ftp file transfer
- 4. telnet access to logon to remote databases.

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The electronic bulletin board can easily handle items 1 and 2, make item 3 largely irrelevant, and may eventually provide item 4.

The question of ftp file transfer is largely mute. Most BBS have thousands of files online already and if access to files on the Internet becomes necessary, the BBS can import the files and keep them on hand. Rather than having individual callers access the Internet to ftp the same files over and over, the BBS can keep the more popular files "staged" on the BBS itself for download. This would reduce the redundant traffic on the Internet, and probably provide the caller with a better interface for locating and downloading files. In reality, the "monster" file archives on Internet don't quite qualify as a "big" BBS now with many private bulletin boards sporting over 50,000 files.

Currently, the two most important elements of Internet access are Usenet News Groups and personal e-mail over the Internet. And bulletin board systems can offer this service, in only a slightly degraded form, right now. Usenet News Groups are similar to the echoed mes-

sage conferences currently available on dozens of BBS networks - except there are nearly 2000 of them and they have an audience as wide as the Internet. Internet e-mail is growing in importance simply because of the scope and reach of the Domain Naming System and the gateways for e-mail between Internet and nearly every other network in the world. You can send an e-mail message globally in minutes at virtually no cost - a pretty good combination. Internet has reached a critical mass at this point where if you operate any kind of e-mail service - from a hobby BBS to PRODIGY and particularly including an office LAN, if you don't have a connection to exchange mail via Internet - you're an island.

The ideal connection between a bulletin board system and the Internet would consist of a dedicated telephone line and a TCP/IP Internet connection. This would provide a full real-time connection to the Internet. Internet users could logon to your BBS using telnet and your BBS callers could access Internet services. However, the costs of a dedicated line - often \$600 to \$1000 per month, plus the cost of a bridge-router

(anywhere from \$6000 to \$30,000), and a Channel Service Unit/Digital Service Unit (CSU/DSU - typically \$800-\$1200) make this a bit pricey. Typically, a "membership" fee for this type of connection runs about \$10,000 per year as well. It will likely be several years before bulletin boards routinely sport full time connections to the Internet.

And they really don't add much to the BBS. For about \$35 per month, a regular modem, and a bit of software, bulletin boards can serve as a channel for personal e-mail and Usenet News Groups right now. Their callers can then send and receive e-mail messages, subscribe to mailing lists, and participate in the hundreds of the Newsgroup message conferences available on Usenet. And they can do it using their existing offline mail readers or the familiar message base interface of their usual BBS haunts without having to learn much of anything beyond basic BBS etiquette - a much lower level of acculturation.

For the general population, both the economics and the learning curve favor a BBS interface. Full Internet shell accounts start at about \$15 per month. If

you are going to use it for basic e-mail and don't necessarily want to take a graduate course in UNIXology, it would be much more convenient, easier, and less expensive if your \$50 per year BBS account would handle the load. The e-mail would arrive within a few hours or a day, rather than within a couple of minutes - small bother for most users.

The basic requirements to accomplish an Internet interface for a BBS include:

- UUCP Host Account
- Domain Name Assignment
- Interface Software

UUCP HOST ACCOUNT

The first order of business in interfacing a BBS to the Internet involves acquiring a UUCP host that is connected to the Internet. Many University computer science departments and even some commercial corporations will provide accounts at no charge at all. But these are provided on an "as available" basis and are subject to the whims of whoever is running those systems. There are a number of "regional" internet service providers and several companies who provide more reliable connections for a fee - usually about \$35 per month for UUCP e-mail and the basic Usenet Newsgroups. The best connection deals we've seen offered come from the following providers:

Colorado SuperNet

Colorado SuperNet is probably our favorite and the host service we use for **BOARDWATCH.COM** - understandable enough given the local geography. The system offers a number of connection options including a UUCP account at a basic charge of \$2 per hour with a \$20 monthly minimum. The service also requires a \$20 setup charge and there is an additional \$20 charge to register your own domain name. They offer a very capable SUN system network with Telebit modems offering 14,400bps V.32bis connections. They also offer slightly pricier **SLIP** and **PPP** connections and are quite progressive in experimenting with new services and software. One minus for most of our readers - with a limited support staff, SuperNet currently offers service only to residents of Colorado. Colorado SuperNet, Inc., Colorado School of Mines,

1500 Illinois Street, Golden, CO 80401; 303-273-3471 voice; 303-273-3475 fax. Internet: dcm@csn.org

Netcom

UUCP E-Mail and Netnews feed connection is available at \$35 per month. And Serial Line Internet Protocol (**SLIP**) and Point-to-Point Protocol (**PPP**) connections are available at a monthly charge of \$150. None of these services require any connect time charges at all, beyond the callers own long distance charges to reach the Netcom point of presence in San Jose, California.

The company provides a **GUEST** account anyone can dial up to access further information about the services available at (408)241-9760 or (415)424-0131. Type **guest** at the login: prompt - no password necessary. The guest account doesn't provide shell access, but you can fill out an application online and get more information about the company. They are pleased to provide service to anyone in the nation. Netcom Online Communications Services, 4000 Moorpark Ave., Suite 209, San Jose, CA 95117; (408)554-UNIX voice; (408)241-9145 fax; Internet: info@netcom.com.

Performance Systems International

PSI offers a service they title **UUPSI**. This provides dial up access to systems using the normal UUCP mail session via high-speed 9600 bps connections. Simple UUCP e-mail is priced at a flat \$25 monthly while e-mail and Usenet News Groups come at \$75 per month.

There is an initial \$75 setup fee, but PSI includes registration of your system for its own unique domain name in the Internet. PSI also offers an additional set of conferences at an extra charge called **CLARINET** that provide such additional copyrighted services as UPI News, Newsbytes, Dave Barry's columns, etc.

PSI is probably the current favorite for most bulletin boards largely because they offer local access in some 25 cities via their own network and seem to be adding cities at a rapid pace. Performance Systems International, Inc., 11800 Sunrise Valley Drive, Ste. 1100, Reston, VA 22091; 800-827-7482 voice; (703)620-4586 fax; e-mail: info@psi.com.

CERFnet

CERFnet offers a program titled **Dialn'** **CERF** allowing dial up connections to a UNIX shell account at high speeds for \$20 monthly plus \$5 hourly connect time. Any long distance charges to San Diego are also extra. The dissuader with this service in the past has been a \$250 installation fee. CERFnet has offered to waive this fee for Boardwatch readers.

The company also publishes a fascinating newsletter titled **CERFnet News** available in both print and e-mail formats. CERFnet, San Diego Supercomputer Center, P.O. Box 85608, San Diego, CA 92186-9784; (619)534-5087 voice; (619)534-5167 fax. Internet: help@cerfnet.

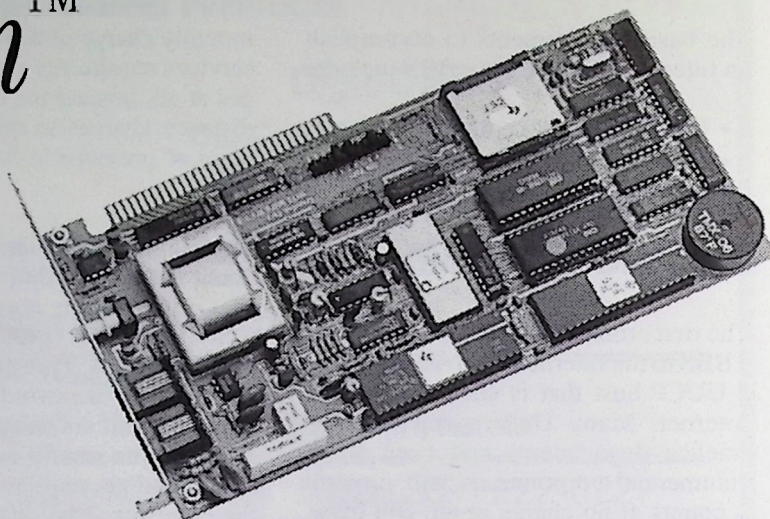
DOMAIN NAME REGISTRATION

With a UUCP host account, your system will receive an e-mail address. Depending on how far out the chain you are with your connection, this address can be quite lengthy. There is a way to shorten it however by registering a **DOMAIN NAME** for your system with the Network Information Center. Callers can then address e-mail to a much shorter, more identifiable address such as **CHANNEL1.COM**. E-mail to individual callers to the BBS would be addressed to something like **BRIAN.MILLER@CHANNEL1.COM** or **JRICK-ARD@BOARDWATCH.COM**.

Normally, the entity providing your UUCP host account can help you process an application for domain registration. This typically takes about 8 working days to go into effect and there is usually a fee of around \$20 involved. Since this registration usually requires some information from and about your host system, it is best to work with them on domain name registration. The actual center of the universe where this is processed is at the Network Information Center or NIC. As of October 1, 1991, the NIC was moved to Chantilly Virginia and is now administered by Government Systems Incorporated. Their contact information:

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Although 9600 bps modems have been available for a number of years, only a few percent of the modems in use today operate at this high speed. Their cost is prohibitive to the average modem user. CompuCom has changed that. They are making high speed modems affordable to ALL, not just the few percent who could afford them.

The *SpeedModem* is compatible with all modems up through 2400 bps and MNP5. At 9600 bps or higher it is similar to other popular modems, it will communicate only with one of its own technology. However, at costs competitive with 2400 bps MNP modems it's like buying a 2400 bps modem and getting 9600 bps FREE! Bob Mahoney of EXEC PC sums it up:

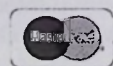
"The CompuCom *SpeedModem* provides all the utility of a high quality 2400 bps MNP5 modem, but it gives 9600 bps in the package. With that, it is priced below most modems that offer only the 2400 bps (MNP) speed. Instead of buying a modem like that for \$169, why don't they buy a

BBS Advantage

real 9600 bps that also does a good job at 2400 bps MNP5? The *SpeedModem* is such a modem."

Sysops are beginning to realize that the *SpeedModem* is the only opportunity for most of their users to join the ranks of the high speed Top Guns. Thus they are adding it to their service. Although the *SpeedModem* has been in production only a short time, hundreds of BBSs are online including EXEC PC and Rusty n Edie's.

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Help Desk Telephone Numbers:

800-365-3642

703-802-4535

Fax Number: 1-703-802-8376

Network Address: 192.112.36.5
(NIC.DDN.MIL)

Root Domain Server: 192.112.36.4
(NS.NIC.DDN.MIL)

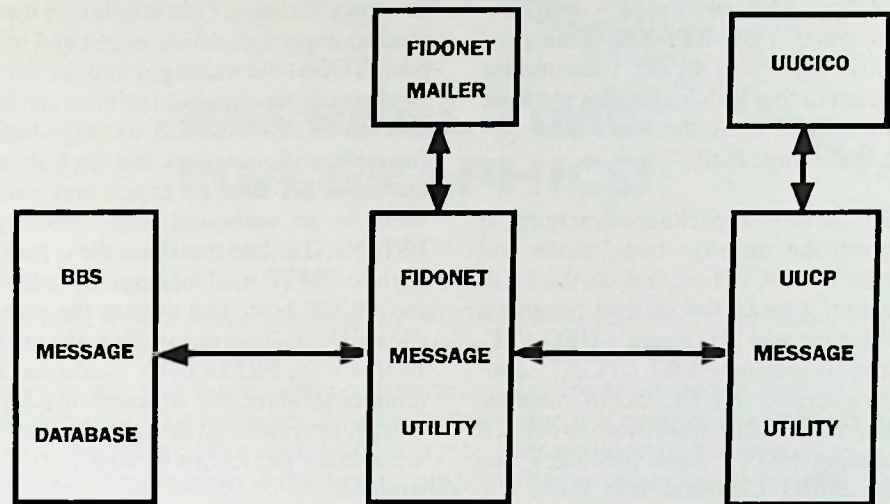
UUCP TO BBS INTERFACE SOFTWARE

Most of the BBS/Internet interface work has been done in the Fidonet community. Tim Pozar and Randy Bush have been plowing this frontier for several years now and others have been at work as well. Thomas Dell actually publishes a BBS package for PCs titled WAFFLE that includes a UUCP interface.

To understand the process of porting Usenet Newsgroups and e-mail, it might first help to look at a typical BBS Fidonet setup. All bulletin board systems contain a message database of some type. This is a database containing all the messages entered on the system locally. Callers dial in to read and respond to messages and increasingly, use offline mail readers to dial in, retrieve a packet of mail, and read/respond offline entirely.

Fidonet was originally based on Tom Jennings FIDO BBS software. Messages have a specific format for storage individually on this type of BBS and so they can be exchanged with other systems rather easily. Packages such as OPUS and MAXIMUS still deal with Fido-style messages more or less directly.

Almost all other BBS software features proprietary message databases. And as the desire to connect to Fidonet grew, utilities were developed to translate Fido style messages to specific proprietary BBS database formats. The process of exporting messages from the BBS message base to Fido format is usually referred to as a **SCAN** operation where the BBS message base is scanned for outbound messages which are then



BBS MESSAGE BASE TO UUCP INTERFACE

extracted and converted to Fido format, packaged, and in most cases compressed for mailing.

The process of importing Fido messages into specific message areas in the BBS database is usually termed a **TOSS** operation. Incoming Fido messages are unpacked, sorted out and mapped to specific BBS message areas, and "tossed" into them so callers can read them. Wildcat! system operators for example use a utility called **TOMCAT** to do **SCAN/TOSS** operations while Major BBS operators use a program titled **MjrFido** to do the same thing. TBBS operators choose from eSoft's **NETMAIL UTILITIES** or a third party utility titled **TMAIL** by Australian Larry Lewis.

Almost all popular BBS packages have some sort of utility for mating to the Fidonet in this way, although often they are offered by third party developers rather than the original BBS author.

Aside from the **SCAN/TOSS** utilities, most systems use a particular Fidonet compatible **MAILER** program to actually make the connection and exchange mail with other systems. These programs are generally **NOT** specific to any BBS software. BinkleyTerm, SEAMail, Front Door, and D'Bridge are probably the most popular mailers and

virtually any of them can be used with any BBS software. For that matter, they can be used alone. These mailers use the Fidonet nodelist as a telephone directory, actually operate the modem, and provide the protocols and handshaking to dial another Fido system, negotiate a protocol, and deliver/receive mail packages and files. In some applications, the mailer actually monitors the telephone line and receives calls. If the incoming calls are not automated mail systems, the mailer then passes control to the BBS software - acting as what is generically termed a "front door" for the BBS package. In other cases, the BBS shuts down on a time schedule to run a mail "event" where the BBS unloads, and runs the mailer separately to send out any outbound "mailbags."

Much of the effort in interfacing bulletin boards to the Internet involves this existing Fido-style operation. These Fido systems can be modified by adding two basic modules: an **SMTP** message to Fido message translator and a **UUCP** dialer interface. **SMTP** (Simple Mail Transfer Protocol) is the standard for Internet message formatting and these are the type of messages you will receive over a **UUCP** connection.

The Unix program normally used to make the **UUCP** (Unix to Unix Copy Program) connection using a modem is

called **UUCICO** - Unix to Unix Copy In Copy Out program - usually pronounced YOU-KIY-KO. This program is analogous to the Fido mailer program in that it manages the modem, automatically dials the local host system, and swaps mail.

There are several packages emerging to perform the message translations and fill the **UUCICO** function on the DOS platform. One of the earliest programs of this type was Tim Pozar's **UFGATE**. Currently in release **1.03**, **UFGATE** contains a version of **UUCICO** to make the calls, and translation software to convert incoming **SMTP** style messages into Fido **.MSG** files and toss them into Fido-style message directories. From there, the existing Fido/BBS **SCAN/TOSS** utilities can pick up the **.MSG** files and import or toss them into the BBS message base. Likewise, messages entered on the BBS can be scanned and converted to standard Fido **.MSG** files. **UFGATE** can pick them up, translate them to **SMTP** messages, and send them out to the local **UUCP** host for transmission over the Internet. This process works equally well for individual e-mail messages and Usenet News Groups. In this way, with a call or two per day to a Unix host, the BBS can participate in Internet mail activities as a **UUCP** connection. **UFGATE** is available in the file **UFG_103.ZIP**. Registration \$35 for non-commercial entities - \$195 for commercial, corporate, or governmental use. Contact Tim Pozar, Late Night Software Co. 671 28th Street, San Francisco, CA 94131; (415)695-7727 voice; (415)695-0759 BBS.

A more recent and slightly more efficient program to do the same thing is Joe Hance's **FREDGATE**. Currently available in the file **FRD_18K.ZIP**, **FredGate** works quite similarly to **UFGATE**. However, it runs much faster and deals not with the older individual Fido **.MSG** files, which consist of individual files for each message, but rather with Fido **.PKT** packets. These packets contain numerous messages that must be unpacked.

Since most Fido mail utilities use the concept of packetizing mail, this is not much of a problem. **FREDGATE** simply converts incoming **SMTP** messages to a Fidonet **.PKT** packet and stores it in

the normal Fidonet inbound mail subdirectory. Existing Fido utilities are then used to unpack these messages and import (**TOSS**) the messages into the BBS database. Likewise, Fido utilities can be used to **SCAN** the BBS message base for outbound messages and pack them up into **.PKT** files for export and place them in an outbound mail directory. **FREDGATE** then translates these packets into **SMTP** mail messages to send to the **UUCP** host, and creates the work files **UUCICO** needs to deliver the mail. In this way, **FREDGATE** uses a much simpler subdirectory structure than **UFGATE**, operates a bit faster, and is somewhat more flexible in its configuration options.

To actually make the **UUCP** dialed connection, **FREDGATE** includes the **UUCICO** program from Thomas Dell's **WAFFLE** BBS package to make the telephone call to the Unix host and swap mail. The only problem with **FredGate** is the waning interest of the author and an uncertain future. **Fredgate** Version 1.8K is available in the file **FRD_18K.ZIP**. No registration fee for non-commercial use. Contact J.W. Hance, joe@mgcind, CIS 72617,2205; FidoNet 1:231/270.0.

A recent development for PCBoard systems is a Usenet interface written by Mark "Sparky" Herring. Mr. Herring is more widely known as the author of the **QMail Deluxe** offline mail reader - a shareware program with over 10,000 registered users. His **PCB/Usenet Gateway** program offers some good news and some bad news. The good news is that the Fido interface is not necessary - although many PCBoard systems DO regularly connect to Fidonet and could use **UFGATE** or **FredGate**. Herring's program actually translates the **SMTP** messages directly into **PCBoard** message format without the intermediate Fido steps. Individual Usenet Newsgroups are simply mapped to PCBoard conferences. To do the host dialing, Herring's program also uses the same **UUCICO** from Thomas Dell's **WAFFLE** program.

The program does require the caller to enter special **TO:** and **SUBJECT:** fields to participate in Usenet newsgroups and e-mail. Sparky Herring has addressed this somewhat with his offline mail reader, **QMail Deluxe**. Currently in ver-

sion **1.21**, **QMail** allows the user to simply **REPLY** to Internet messages and it automatically captures the from address and inserts it into the reply. When used with **PCB/Usenet Gateway** equipped **PCBoard** systems, this allows callers to deal with Internet e-mail and news groups offline just as they do any other **PCBoard** mail conference. The latest version of **QMail Deluxe** can be downloaded from the **QMail** support BBS at (901)382-5583.

The bad news regarding **PCB/Usenet Gateway** is the price - \$3000. This is more money than virtually any full BBS software package we're aware of and completely out to lunch for a utility program. The program was originally developed by Herring for Canada Remote Systems in Mississauga Ontario. It's since appeared on Andy Keeves Executive Network BBS in New York and Brian Miller's Channel 1 BBS in Cambridge. The **PCB/Usenet Gateway** program is actually being marketed by Canada Remote Systems. Contact Michael MacDonald, Canada Remote Systems, 1331 Crestline Drive, Unit D, Mississauga, Ontario Canada, L4W-2P9; (800)415-7562 voice.

Ed Hopper also thinks \$3000 is a bit proud. He's been working on a similar program for PCBoard systems he calls **uuPCB**. This program is still in wide beta test as of January 1, 1992 but allows the **UUCP** connection and imports exports both Internet e-mail and Usenet Newsgroups to PCBoard conferences.

The delightful thing about Hopper's program is that the callers need do nothing unusual with the **TO:** and **SUBJECT:** fields in the PCBoard conference areas. They simply read and respond to mail as they do in any other conference. In Usenet Newsgroups, "moderated" conferences require you to send e-mail to the moderator, who then decides whether or not to publish your message. Hopper's program simply requires the sysop to set up moderated conferences as private e-mail conferences.

The best part about **uuPCB** is the price - \$49 for PCBoard systems running three lines or less, \$99 for those running the six line PCBoard, \$149 for the 9-line version, \$174 for the 25-line boards, and \$199 for the unlimited PCBoard sys-



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tems. This is more in the range of the average BBS operator's budget. Ed Hopper, 3403 Jacquelyn, Pearland, TX 77581; (713)997-9834 voice; (713)997-7575 BBS; Internet: ed.hopper@ehbbs.hou.tx.us.

Another approach is to run a dedicated UUCP mail package as a "door" program. BBS software such as PCBoard, Wildcat!, RBBS, and Searchlight can run external programs by shelling the BBS out to the program. The **WAFFLE BBS** program mentioned earlier can be set up as a door program to provide access to Usenet News Groups and Internet e-mail. **Waffle 1.64** is available in the file **WAF164.ZIP**. Registration for non-commercial use is \$30. Commercial or governmental use is \$120. Thomas E. Dell, Darkside International, PO Box 4436, Mountain View, CA 94040; dell@vox.darkside.com; (408)245-7726 - BBS.

Configuration of any of these packages is NOT trivial. But anyone who has set up a Fido node in the past would have little difficulty. The most troublesome

area at this point has to do with the relatively complicated nature of addressing messages via the Internet. All of these programs effectively translate between the BBS message base and the Internet. But the BBS software packages themselves weren't specifically designed for Internet mail duties and too often, the result appears to be a bit of a kluge to the callers. Until BBS software developers incorporate interface options specific to Internet mail duties, callers will likely be copying Internet e-mail addresses off onto little yellow stickies and entering them back into reply messages by hand - hardly a convenient situation.

And development will probably not stop with UUCP. UUCP is a rather old technology and there are several others coming into play under the Transmission Control Protocol/Internet Protocol (TCP/IP) that still offer the economic advantages of a dial-up on demand connection. Most notable among these are the Serial Line Internet Protocol (SLIP), and Point-to-Point Protocol (PPP). These offer the file transfer

protocol (ftp) and interactive logon (telnet) functions missing from UUCP. These protocols will become intrinsically more interesting if the 144kbps Integrated Services Digital Network (ISDN) services are actually implemented by the telephone companies in the near future.

In any event, we see a future where electronic bulletin boards provide the interface and mass user service capability the Internet needs to bring the world online. At the same time, Internet provides the global scope needed to connect all bulletin boards and their callers on a common e-mail bus. Despite this natural attraction, there are differences in these respective universes. The cultural and technical clash between them should, if nothing else, prove interesting.

BOARDWATCH MAGAZINE

LIST OF BBS SOFTWARE VENDOR PRODUCT SUPPORT/DEMO BULLETIN BOARD SYSTEMS - JANUARY 1992

PRODUCT	COMPANY	BBS PHONE	NOTES	VOICE	MAILING ADDRESS
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APPLE/MACINTOSH

First Class	SoftArc, Inc.	(416)609-2250	. Multiline Macintosh BBS Package	(416)299-4723	. 805 Middlefield Road, Ste. 102, Scarborough Ontario,
Hermes	Frank Price/AOC Software Inc.	(213)275-6975	. MAC - Multiline BBS for Macintosh - Very good		. 612 Doheny Road, Beverly Hills, CA 90210
Manston	Michael Pester/Software Design	(515)279-6769	. Macintosh BBS package	(515)276-9650	. PO Box 12016, Des Moines, IA 50312
Proline	pro-sof/Morgan Davis	(619)670-5379	. Apple II/GS - Unix lookalike BBS - Usenet News	(619)670-0563	. 10079 Nueto Ln, Rancho San Diego, CA 92078
Second Sight	Scott Watson, FreeSoft Co.	(412)846-5312	. Single Line BBS Software for Macintosh	(412)846-2700	. 105 McKinley Road, Beaver Falls, PA 15010
Tabby	Michael E. Cornick	(201)988-0706	. MAC - FidoNet Mail Interface for Macintosh		. PO Box 307, Bradley Beach, NJ 07720
Telefinder	Spider Island Software	(714)730-5785	. Multiline Macintosh BBS - up to 20 lines	(714)669-9260	. 4790 Irvine Blvd. Ste. 105-347, Irvine, CA 92720

MS-DOS/PC-DOS

DCI	Nordevald Software	(813)961-0788	. DOS		. POB 280138, Tampa, FL 33682
DLX	Inner Loop Soft c/o Baudtown	(818)893-7600	. Multiline - 32 lines - excellent chat/social system.	(818)893-2321	. 17939 Chatsworth St. #192, Granada Hills, CA 91344
Falken	Info*Share	(703)803-8000	. DOS/Multiline-16 lines-runs ext programs		. P.O. Box 1501, Woodbridge, VA 22193
Fido	Tom Jennings	(415)863-2739	. DOS/Single Line - Original Fido BBS Software	(415)861-7183	. Box 77731, San Francisco, CA 94107
FSUUCP	Chris Ambler, Fubar Systems	(805)543-8227	. Internet/UNIX Communications for DOS machines		. 1742 Lima Drive, San Luis Obispo, CA 93405
GAP	GAP Development Co.	(714)493-3819	. DOS/LAN 99 Nodes - Fast ISAM Searches		. 24242 Porto Fino, Laguna Niguel, CA 92677
Genesis BBS	Carter Downer	(315)592-7300	. DOS/LAN - Multinode - Flexible Doors		. Box 267, Hamibal, NY 13074
InfoHost	A-Cornm Electronics Inc.	(201)288-7792	. DOS/Multiline - Database	(201)288-7885	. 377 Route 17 South, Hasbrouck Heights, NJ 07604
Kitten	System Enhancement Assoc.	(201)473-1991	. DOS/Single Line - also SEADog FidoNet Mail Program	(201)473-5153	. 21 New Street, Wayne, NJ 07470
Major BBS	Galactcomm, Inc.	(305)583-7808	. DOS/Multiline - 255 lines-chat-multuser games	(305)583-5990	. 4101 SW 47th Ave #101, Ft Lauderdale, FL 33314
Maxihost	Don Mankin	(209)836-2402	. DOS/Single Line - Small, Easy to Run		. 231 Market Place, San Ramon, CA 94583
Maximus-CBCS	Scott Dudley	(613)389-8315	. FidoNet compatible BBS - multi-node	(613)389-6065	. 777 Downing Street, Kingston Ontario, Canada K7M 5
Opus-CBCS	Opus-CBCS Development	(412)366-5208	. FidoNet compatible BBS - multi-node	(412)364-4017	. 8024 Crest Road, Pittsburgh, PA 15237
Oracom	Surf Computer Services	(619)346-1658	. DOS/Multiline - 32 lines - social chat	(619)346-9430	. 71-540 Gardes Rd., Rancho Mirage, CA 92270
Osiris	Micro Tech	(314)334-6359	. DOS/LAN Multinode 256 lines - Online Store	(314)335-5384	. Cape Girardeau, MO 63701
PCBoard	Clark Development Company	(801)261-8976	. DOS/LAN-99 Nodes-Popular BBS for shareware BBS	(800)356-1686	. PO Box 7135, Murray, UT 84107
QuickBBS	Creighton/Gabrilowitz	(407)896-0494	. DOS/Single Line - Shareware clone of TBBS		. POB 678255, Orlando, FL 32867
RBBS	Ken Goosens	(703)978-6360	. DOS/LAN Multinode - Free - BASIC Source Avail	(703)978-4339	. 5020 Portsmouth Rd., Fairfax, VA 22032
Remote Access	Continental Software	61 9 389 8048	. DOS/LAN 99 nodes-TBBS/QuickBBS clone-flex menus	61 9 386-5218	. 195 Adelaide Terr., Perth, Australia, 6000
Searchlight	Searchlight Software	(516)689-2566	. DOS/LAN - Multinode - Visual and easy to use	(516)751-2966	. PO Box 640, Stony Brook, NY 11790
Spitfire	Mike Wolz	(515)225-8496	. DOS Single Line		. Des Moines, IA
TBBS	eSoft Inc.	(303)699-8222	. DOS/Multiline - 64 lines per machine - good database	(303)699-6565	. 15200 E Girard Ave # 2550, Aurora, CO 80014
Tritel	Mark Goodman	(207)941-0805	. DOS Multi-Node - Fido capable - offline mail		. PO Box 187, Orland, ME 04472
UFGATE	Tim Pozar	(415)695-0759	. Utility to import/export Usenet News from Unix Systems	(415)695-7727	. 671 28th St., San Francisco, CA 94131
Wildcat!	Mustang Software	(805)395-0650	. DOS/LAN/250 Nodes - Very good on LAN installations	(805)395-0223	. 3125 19th St Ste 162, Bakersfield, CA 93301
WWIV	Wayne Bell	(213)208-6689	. DOS/Single Line - C source available with registration		. 904 Silver Spur Rd. #636, Rolling Hills Est, CA 90274

OS/2 - WINDOWS

Magnum BBS	Chuck Gilmore	(818)706-9805	. OS/2/LAN-8 Lines per computer - looks like PCBoard	(818)706-9800	. 1285 Falling Star Ave., Thousand Oaks, CA 91362
PowerBBS	Russel Frey	(516)822-7396	. Runs under Windows 3.0-Up to 8 tel lines. Doors	(516)938-0506	. 35 Fox Ct., Hicksville, NY 11801

UNIX

CocoNet	Coconut Computing, Inc.	(619)456-0815	. Unix - Hires Graphics like Prodigy - term program	(619)456-2002	. 7946 Ivanhoe Ave Ste 303, La Jolla, CA 92037
TEAMate	MMB Development Corp.	(213)318-5302	. Unix/Multiline - VT100 ANSI Graphics	(800)832-6022	. 904 Manhattan Ave., Manhattan Beach, CA 90266
XChange	ZMax Computer Solutions Inc.	(315)622-4672	. Unix - Pull Down Menus/Pop-up Windows	(315)622-4577	. PO Box 339, Clay, NY 13041
Magpie	Steve Manes	(212)420-0527	. DOS/UNIX Conferencing Software with unique threading	(212)533-1692	. 648 Broadway, Ste 300, New York, NY 10012
WAFFLE	Darkside International	(408)245-7726	. DOS/UNIX - Provides UUCP function for DOS machines		. PO Box 4436, Mountain View, CA 94040

DIRECT DIAL

COMPUTER SHOPPING NETWORK

The formation of an online society has brought with it a probably unavoidable accompanying urge to sell to it. Oddly, those who attempt to do so generally throw everything learned about selling over the past 10,000 years straight out the window. Some of the results are comical - others irritating.

The foibles start with the usual numbers game. The concept of ten million online modem users stirs a froth of avarice. To reach an audience of ten million with no printing, postage, or mailing list costs sounds like a dream come true. What most of the proponents of this mail order madness fail to note is that the ten million are made up of approximately 300,000 group clusters of 35 members each - all engaged in discussions that most advertising messages do not contribute to at all.

So the online sales scenario thus far has been almost comically inept of the form that you devise a two screen advertisement, upload it to a dozen points of presence online, and note that after two months it has generated a grand total of three inquiries. The autopsy of this debacle renders the conclusion that "nobody online buys anything."

The larger online commercial services have an even more powerfully interesting twist on this concept. They've tried to pitch the concept of online sales to merchants by setting it up so the merchant doesn't really have to pay anything to be online. The pitch goes something like this: "We believe in this concept so strongly, we will put you online at no charge, and take a cut of actual sales generated online as our advertising fee. If we don't sell any, it costs you nothing. If we do, we'll gladly accept a small percentage of each sale."

On the surface, this makes sense. In practice, it doesn't work at all. Why? The chocolate/teddy bear/software merchant simply agrees to the deal, calculates the commission of the online ser-

vice, and adds it to their regular prices. Then if any DO happen to sell online, they lose nothing at all and again get FREE advertising. And of course, virtually all the online sales games have generated almost nothing in the way of sales.

The failure point here is the all too common mistake of assuming everyone else on the planet is in desperate need of another twelve IQ points to be able to bark like a dog. In reality, people may be a bit dumb about any number of things, but when it comes to their hard earned money, you may safely assume they are all geniuses. If you are selling Word Perfect for \$225 in every computing magazine on the planet, and offering the same title online for \$245, it simply isn't going to sell. And to those who are online and see the offer, they assume you are trying to use the "novelty" of online sales to rip them off.

In theory, any item offered online should be LESS expensive than the same item offered via any other medium. Why? Because the customer is doing all the order entry directly. The labor costs to take orders by telephone are substantial in the mail order game - particularly critical on low margin items. The sales representative asks for a series of 12 to 15 data elements and the customer replies, laboriously spelling out their name, the name of their street, the name of their city, etc. and often having to repeat certain elements into the phone to get it through. The sales clerk dutifully keys this in to the system, more or less accurately, which usually automatically clears the credit card charges, prints out the invoice and packing list, and calculates the shipping costs.

In online mail order, the customer keys all this in themselves - reducing errors, eliminating the 800 number charges, and dramatically reducing the labor required to process an order.

The keys to successful online mail order merchandising are no great surprise: price, selection, price, delivery, price, service, and price. If word gets out that you can buy anything useful at all online at a lower price than you can at the local store or by calling an 800 number voice line, the lines will light up and the sales will happen.

We've found a system in Sevierville Tennessee that seems to have mastered the formula. Steve Nichols has set up a system titled the **Computer Shopping Network** at (615)573-8888 using Galacticomm's MAJOR BBS software. It's not yet the slickest system we've seen, but he claims he's doing over a million dollars a year in gross sales on the system and after a brief visit, where we couldn't resist parting with a few greenbacks ourselves for some books, we believe every dollar of it.

Nichols has set up a database of products titled **INFODATA** that we found striking in both the breadth of selection and the prices offered. Over 150,000 books and cassettes were offered at prices typically a third below list - as attractive as inveterate book hounds such as ourselves have seen. Better, we were able to find two Unix books (Managing UUCP and Usenet and Using UUCP and Usenet) as well as Brian Tracy's Psychology of Achievement cassette tape series in less than five minutes. We've been casually on the lookout for all three titles for the past six months with no success at all. The books database can be searched by author, topical category, or title and includes the publisher, publication date, list price, and the CSN price. On most titles, the prices were 30% or more under list but some publishers were offered at the list price with no discount at all. While odd, this is pretty clearly labeled in the listings and not really confusing.

The same database offers hundreds of computer products including modems, laser printers, laptops, and dozens of hard drives and CD-ROMS. We found an OKIDATA 840 laser printer for less than we had seen elsewhere (\$1699 - list price \$2995). A Fujitsu MS 2266SA 1.2 Gigabyte hard drive for about \$1390. The U.S. Robotics WorldPort 9600 V.32 pocket modem now lists for \$599 and CSN had it for \$421.56. The hard drives can be searched by interface type - SCSI, IDE, MFM, or ESDI, and even narrowed by total capacity, speed, and manufacturer.

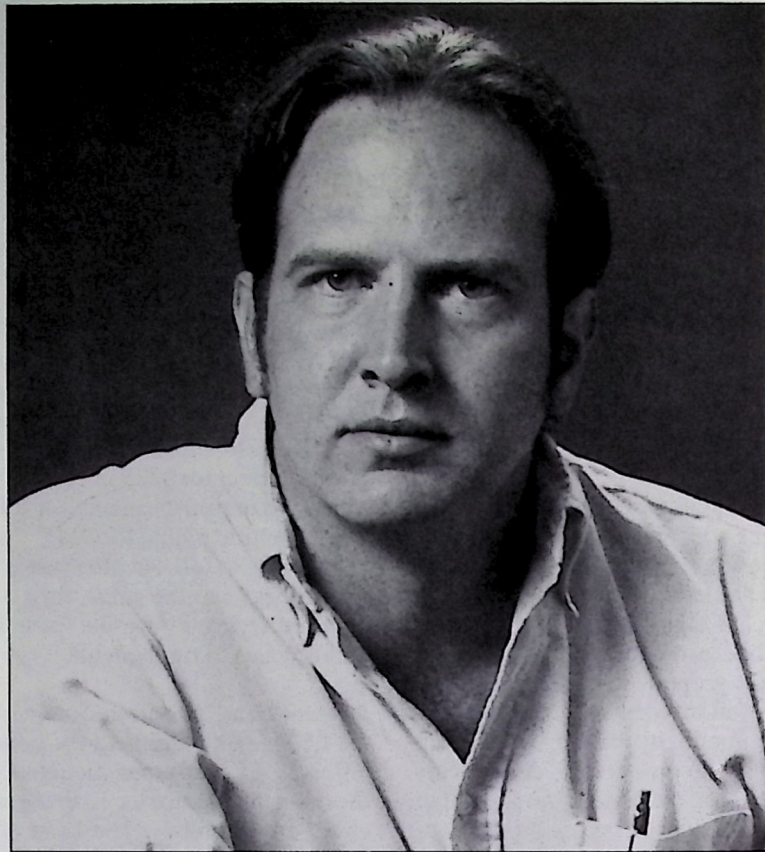
Beyond books, tapes, and general computer hardware, if the system has a specialty it's products for Commodore's AMIGA line of personal computers - an extensive selection of AMIGA products is offered.

The ordering process, while not linked directly to the database as we would have liked to have seen, was fairly straightforward. You do NOT have to enter your name and address again to order. Simply enter a description of the product and the CSN price, a credit card number and expiration date, and your shipping preference, and the ordering is done. The result is a marvelous search and location capability from an enormous selection, relatively easy ordering process, and prices we are confident are as good or better than anything you'll see anywhere.

Negatives? A few. The system limits your time online to about 20 minutes. You can be entering a credit card number and when the clock runs out, the system will knock you off right in mid-purchase. Pretty cunning sales technique there. There are numerous elements of the BBS, including basics such as getting a return receipt after sending a message to the system operator, that you will not be able to actually use because you don't have enough "credits". We're not sure we know what a "credit" is but I'm pretty sure we don't have any. It would appear you can purchase additional time on the system at \$1 hourly - a bit pricey for an otherwise ordinary bulletin board - and a bit confusing if you're trying to decide if Mr. Nichols is selling products online or running an entertainment BBS system.

The owners specifically disclaim any responsibility for compatibility or product performance of the computer hardware which is a bit of a shakey policy given the realities of computer hardware mail order sales. Basically, if you buy it and it doesn't work, they'll give you another of the same model - beyond that you're stuck with it. Sounds like good work when you can get it but I'm disinclined to consider this a viable policy.

That notwithstanding, Computer Shopping Network is a good effort in online selection, price, and convenience. If you don't mind a warranty policy that basically states that "if you break it - both pieces are yours," it's an attractive service. Computer Shopping Network, P.O. Box 5500, Sevierville, TN 37864; (615)577-5100 voice; (615)577-1170 fax; (615)573-8888 BBS.



Tim Stryker - Sysop, SuperDemocracy Foundation BBS

SUPERDEMOCRACY BBS

Or, whatever happened to Tim Stryker, author of MAJOR BBS? There are numerous vendors who have developed BBS software. Almost all run product support bulletin boards of course where you can find out about their latest releases, get answers to technical questions, and complain incessantly to the authors about the features they "should" be adding to the product. But have you ever wondered what it would look like, if one of these authors actually went and set up a BBS of their own on an entirely different topic?

Tim Stryker started life as a programmer by writing interactive games on Commodore PET computers tied together with a serial cable. He went on to create interactive adventure games, one of which required up to six of the players to "cooperate" to get out of their adventure game trap and "solve" the game. The things he learned about interactive multiline systems went into the design of MAJOR BBS, a multiline BBS package, and Galacticomm is very much the

company he created to develop and sell these BBS products. Last year, Stryker announced he was resigning as president of Galacticomm, Inc. and turning over day-to-day operations to the new president, Bob Stein. He would remain Chairman of the Board of the company but we hadn't seen or heard tell of him for many months.

He's resurfaced as, of all things, a BBS operator and author. He's been working on a reflective book on the changes in our society and culture titled *Think A Little* and he's founded the Superdemocracy Foundation. He's also started a real bulletin board titled, appropriately enough, **Superdemocracy Foundation BBS** at (305)370-9376.

The theory of Superdemocracy Foundation is that through current online technologies it is possible to eliminate the politicians as middle-men between citizens and issues. Through the use of online communications, it is theoretically possible to pose issues, discuss them, reach consensus, and enact policies on topics directly. Politicians are perceived

as professional sycophants serving primarily narrow special interest groups at the expense of the larger body politic and that this is not due to the poor intentions of the individuals involved, but inherent in the current system. Since it was developed 200 years ago, this was the best system available at the time, but modern technologies obsolete this process in favor of something more participatory and more direct.

A case could be made that in a more subtle form, this is already happening and that modern communications is at the heart of the dramatic changes, in once unassailable totalitarian regimes, currently in process globally. But Stryker et al envision something a bit more formal, eventually with actual ballots online.

The Superdemocracy Foundation BBS is intended to serve as a forum for discussion of these issues. And it would appear to serve pretty well. The system runs on a version of Galacticom's MAJOR BBS slightly younger than the very latest release - understandable as Stryker is undoubtedly still involved in product development at some level. The system is clean, simple, and colorful. It offers some information on Superdemocracy Foundation goals and how you join. But the primary feature of the BBS is a series of four or five discussion areas where political debates go on.

We were intrigued to find a fairly lively debate in progress on education issues involving the local Florida districts. The messages tended to be somewhat detailed and at length - the system allows up to 16KB per message, a fairly generous length by BBS standards. There was also some discussion as to the process to go from our current political system to an online democracy and we were impressed at the level of discussion.

The current discussions probably involve less than a dozen active callers who actually contribute to the areas and Stryker seemed to express some dissatisfaction at this low level of initial participation. All we can say is "welcome to the real BBS world Tim." The first few months in the life of a BBS are hard ones. It takes time and effort to get the word out and develop a following. It's somehow gratifying to see a BBS

software author actually out there trying to build up a special topic bulletin board from scratch and develop a following using their own product. From our point of view, this one actually seems to be off to a comparatively good start. Further, it just might be that future Galacticom products benefit from the experience. Stryker, incidentally, resumed his more active position as President of Galacticom, Inc. effective December 18th. Superdemocracy Foundation Inc., 8930 State Road 84, #191, Davie, FL 33324; (305)370-7850 voice; (305)370-9654 fax; (305)370-9376 BBS.

DATAPORT NETWORK - AND A CHILD PRODIGY SYSOP

by Nick Anis

Young Mike Simmons has learned how to deal with how he was treated by his mother. I don't know if I could handle it as well as he has. When you are four-years-old, losing a father in a car crash is devastating. In the emotional aftermath of the accident, things at home went from bad to worse. And being thrown into a bath tub with nearly scalding water and exposed to repeated fits of brutal violence are more than anyone should be made to endure. But Mike survived. His mother lost custody of her two children. Eventually Mike was made a ward of the court and was placed in a foster home.

Being fostered out is sometimes for the best; it certainly worked well for novelist James Michener, for example. But it didn't work for Mike, who ended up running away. When social workers see foster kids running away, they consider it a bad sign. Some of these unsettled children can wind up on society's slag heap, becoming antisocial adults who stay in trouble one way or another for much of their lives.

But not Mike. After a six month battle with the court, his grandmother managed to win physical custody. That let Mike go back to being a kid. Mike still has a BIG problem, though. The state of Montana insists on "protecting him" by forcing him, his half-sister, and his grandmother to see a court ordered psychiatrist every week.

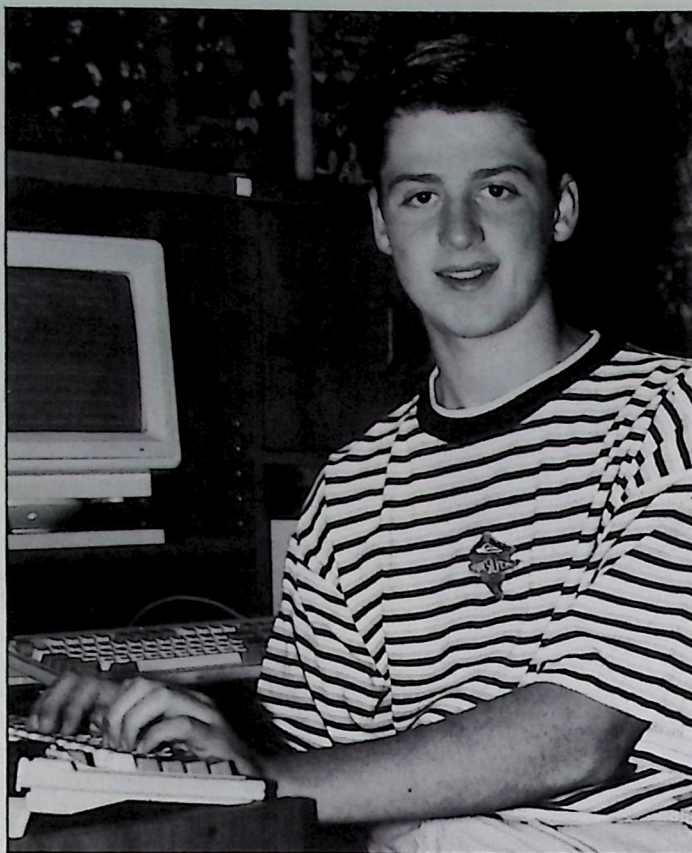
When his therapist, who was working for the state, said he didn't need to go anymore, the state made him change therapists. The bureaucrats keep Mike in a state of fear of being taken away from his grandmother - the only home remaining to him aside from a state facility.

Mike and his grandmother are trying to get the case transferred to the courts in California, where they've lived for over five years and they feel would treat them more fairly and not intrude as much in their lives. But the state of Montana is fighting the transfer.

Many kids have had troubles similar to Mike's, coming from broken homes, court guardianship, and worse. It can result in seriously antisocial behavior. Mike has made a different choice. He's put his energies and creativity onto another path. As any parent knows, most teens spend their free time playing Nintendo or watching the boob tube. Not Mike Simmons. This kid is more likely to be installing a full scale Novell network operating system than watching afternoon cartoons. Mike is a professional consultant for a local computer system dealer.

Mike has a mission. Among other things, he wants to be an engineer someday and with his motivation and talent he undoubtedly will. Mike may also end being remembered as one of the greatest PC jockeys ever to tap at a keyboard. Watching him at the keyboard is like seeing Star Trek The Next Generation's Commander Data at work. Although he hasn't been working with PCs that long, he's already done some mind-boggling things.

Mike started using desktop computers only about a year and a half ago, on what he now rhymingly calls "a sorry Atari." In his first 2 months, Mike mastered the Atari hardware, its Atari XL operating system and every application that came with the overworked machine. His next computer was a 386-16 SX, bought with borrowed money. It didn't take him long to figure out this machine, either. Within another few months he had MS DOS, word processing and database management down pat. This time, instead of changing machines, he turned his sights on more complex tasks like telecom-



Mike Simmons - Six Lines - Age 13 - A Beginning

munications, networks and programming to satisfy his appetite for challenge.

According to Bob Barrett, who runs PCS Computers in Palm Springs, "Mike has helped our customers out a number of times, he's a wonder with tape backup units, Windows, and DOS programming. I have never seen anything like it. It's amazing, just over a year ago he walked in here and knew very little about PCs, and now he knows more than a lot of consultants I know. He's working with networks, bulletin boards, and even C programming."

Programs he's written include software to access data stored on tape and selectively restore it to a hard disk, as needed, by his online users. I was very impressed by the demonstration of this BBS door, and other doors and utilities he has written, and seeing the least cluttered and best organized kid's bedroom and computer lab I have EVER seen in my entire life. He's not only mastered Artisoft's LANtastic network operating system and Novell's Netware, but he's managed

to marry these two systems together in one of the strangest installations you've ever seen - but it works.

Is Mike a prodigy? Watching him work is like what it must have been like to watch Mozart compose. Like Amadeus, Mike throws back his head occasionally and hums, as his fingers fly across his keyboard. And when he talks about what he's doing, he laughs a lot.

Master Simmons borrowed from his grandmother to buy his first 386. Since then, he's repaid the loan with money earned consulting for a local systems integrator, and he's begun expanding his hardware. The world is coming to seem like a PC smorgasbord to him. I think I know, now, why he smiles so much.

Nowadays the energetic eighth grader's hard work has earned him a pair of 386-16 SX and a pair of 386-33 DX machines. He uses this equipment to operate a sophisticated, six-line PC Board BBS that sports over 1000 message conferences, connects to eight mail networks, and boasts more than 600 file directories, all crammed into a smidgen

more than 3 Gigabytes of storage. There are more than 100,000 shareware and public domain files, including applications like word processing, spreadsheet, and database, and all sorts of utilities, sound, and graphics files.

The BBS membership is free for users who purchase Mike's telecommunication and system utility software. Otherwise, a year's membership is available for \$60. Like most BBSs, the board does offer limited FREE access to everyone, though.

His bulletin board is called the **Dataport Network Information System**. Mike has customized the PC Board BBS software with programs he wrote himself in C and assembly language. You can call Mike's multiline BBS at (619) 864-1468. It's located the desert resort community of Palm Springs, California, down the street from Bob Hope. Mike's house -- well, the house owned by his cover girl beautiful grandmother -- formally belonged to Sonny Bono, the entertainer turned local politician. It's a far leap from being fostered out by the state of Montana.

Give Mike's board a call, check it out yourself, and see what you think. Meanwhile, I'm going to invite the kid over to my house to clean up my system, if not my office. They could use the deft touch of a 13-year-old prodigy, with a flair for computers and neatness, and besides, it's fun watching him work.

THIS MONTH'S CITY: DENVER COLORADO

The area we'll focus on in this first issue of 1992 brings a bit of nostalgia. Boardwatch Magazine began life in 1987 as *Denver PC Boardwatch* - primarily to provide a list of electronic bulletin boards in Colorado area code 303. In all modesty, we produced the finest regional BBS list in the country in those days. We called each board every month, and provided detailed descriptions of what was on it. If you hooked a modem to the wall and happened to slip your terminal program into host mode

BULLETIN BOARDS IN FORMER EAST GERMANY

Courtesy of Wolfgang Henke - wolfgang@netcom.com

This list was compiled by Uwe Panzenhagen of Berlin-Prenzlauer Berg,
sysop@dimi-cc.zer.sub.org.

BBS numbers of former East Germany as of November 23, 1991

PHONE	TITLE	MODEM	NET	LOCATION
003730 23221	.....EAST-END	.....9600	.....Zerb	.....Frankfurt/Oder
00372 2291190	...VLBERLIN	.....9600	.....Zerb	.....Berlin
00372 4376877	....DIMI-CC	.....2400	.....Zerb	.....Berlin-Prenzlauer Berg
00372 4398411	....Cross	.....2400	.....Zerb	.....Berlin-Prenzlauer Berg
00372 4367798	....COPRO	.....9600	.....Zerb	.....Berlin-Friedrichshain
00372 2336612	....S-U-N	.....2400	.....Zerb	.....Berlin-Pankow
00372 4817368	....Pericont	.....9600	.....Zerb	.....Berlin-Pankow
00372 5253924	....MACHINE	.....2400	.....Zerb	.....Berlin-Friedrichsfelde
00372 4725306	....Peri.in-Berlin.de	..UUCP	.....Berlin	
00372 7449183	...SATURNBOX	.....2400	.....Berlin	
0372822 663334	....GREIFSWALD	....2400	.....BerlinNet	Greifswald
0372822 663181	....By Byte	.....	.....	Greifswald
003740 312188	....GTC	.....2400	.....
003740 694514	....CBL	.....2400	.....roNet	
003751 434918	....DRESDEN1	.....14.4	.....Art.Net	Dresden
003771 62679	....SACHSEN1	.....2400	.....
0034 7242598	....SEM-BBS	.....2400	.....ProNet	Leipzig
003781 36801	....HRO	.....9600	.....MaNets	Rostock

for twenty minutes by accident, you very well might have turned up on our list.

As our readership broadened, the local list became increasingly irrelevant to the rest of our editorial and our readership and eventually we dropped the list completely and began featuring lists from different cities, countries, and topics in each issue. It has been over two years since we last printed the Denver list. This month, we revisit the city of our birth.

We no longer track bulletin boards specifically in the Denver area. But Denver is not without a list. Bob Voorhees runs one of the oldest, and best bulletin boards in the area at **THE**

PROFESSIONAL SYSTEM BBS at (303)740-2203. When we first arrived in the Denver area, this was probably the first BBS we began "lurking" around on and we spent a lot of time there. Bob was something of a big muckety-muck out at Storage Technology in computer security and in fact was pretty much the heart of the local Association of Electronics Data Processing Auditors Association. He had an early interest in Trojan Horse programs, viruses, and other areas of computer security. This particularly field has generated more self-promoting speakers, consultants, and "experts" per acre than any field crop raised in America. At times, it becomes difficult to tell if some of these guys are curing viruses or selling them. Voorhees is almost vehemently "low

key" and unassuming. But if I had a problem, I'd call Bob and get better quick.

We recently did a revisit to his board and were astounded to find a superbly detailed listing of some 308 electronic bulletin boards on display - updated as of December 1991. Lists containing detailed descriptions, software, and modem speed data are notoriously hard to maintain. They don't happen by everybody "pitching in" to update their own listings. You have to dial em and dial hard. Apparently, Voorhees has been hard at it. We spot checked it just out of curiosity and it was on the mark every time.

When it comes to BBS lists, our avarice knows no bounds. As a result, with Mr. Voorhees permission, we herein present Denver's finest, drawn from Bob's "Computer Telephone Directory". This is always available in electronic form on his system.

And a quick review of the latest issue brings out some interesting elements. Australian Andrew Milner's REMOTE ACCESS BBS software is the clear favorite of Denver system operators with 57 systems (18.5%) sporting the title. Remote Access is actually a clone of QuickBBS, originally written by local wunderkid Adam Hudson at age 15 and Quick still sports 22 systems for 7.1% and a fourth place finish. Quick in turn was patterned after The Bread Board System, a pricey high end package with a home office in Aurora Colorado. TBBS was the third most popular system in town with 24 systems (7.8%). With Remote Access and QuickBBS both distributed as very low cost shareware titles, TBBS showed well considering their basic two-line package is available only commercially at \$295. Over a third of the BBS in the Denver area run one of these three packages.

The surprise package was **TELEGARD** which was virtually unknown when we were maintaining the list. Opus was once a local favorite and it would seem that the move to Telegard was reasonably straightforward for Opus operators. They have the second most popular package in town now with 42 systems (13.6%) wearing their colors. Wildcat and WWTV also have done well

on the front range with 17 and 14 systems respectively. We found 9 Apple II systems still running GBBSPRO - also developed locally and 7 Macintosh systems online with HERMES.

DENVER BBS SOFTWARE

Remote Access	57	18.50%
Telegard	42	13.64%
TBBS	24	7.79%
QuickBBS	22	7.14%
Wildcat	17	5.52%
WWIV	14	4.54%
GTPower	13	4.22%
Opus	12	3.90%
RBBS	9	2.92%
GBBSPRO	9	2.92%
Hermes	7	2.27%
Maximus	5	1.62%
PCBoard	4	1.30%
All Other	73	23.70%

With regards to modem speeds, the trend is no longer really much of a question. The numbers anyway:

DENVER MODEM SPEEDS

1200 bps	10	3.25%
2400 bps	156	50.65%
9600+ bps	99	32.14%
unknown	43	

We were heartened to see some of our old favorites still answering the phone, including Gerry Westerberg's excellent file library **MICROLINK B.** David Shenemen's **DENVER DEAFNET** still focuses on hearing impaired issues., Steve Carnes' **THIS END UP** is where we learned how to net some FidOs. Brian Bartee's **COMM POST** used to have some great astronomy stuff and he seems to have built a pretty impressive file library as well. Lee Lasson is still running **ON-LINE CONSULTING** up in Estes Park - right outside of Rocky Mountain National Park.

Charle's Pelto's **DEMENTIA** and Ron Costa's **DATA-LINK** share an interesting history. Both sysops ran boards by

that name in Denver, moved away to other cities for several years, returned, and resurrected their boards here as if they'd never been gone. Bill Cronister runs a small computer retail store, as well as **COMPUTER CARE BBS** with John Bilbro and has put together a lot of Boardwatch hardware over the past five or six years - including our latest 33 MHz 486 machine.

Tom Meyer has run **SPACENET** for years and I don't think you will find a more cogently and massively presented collection of information on the space program. These guys were promoting a manned Mars mission years ago. As we remember **WORLD PEACE BBS**, it wasn't very peaceful - pretty active political and religious debates actually.

Denver sports some fantastic government bulletin boards. Boulder hosts the National Institute of Science and Technology. This is the home of the national time service - a series of seventeen cesium beam atomic clocks that produce the time mark that legally IS the time in the United States - by public law. They also operate WWV radio - transmitting a time mark across the shortwave bands and an audio telephone mark at (303)499-7111. We actually harangued Dick Davis of NIST through the process of putting up the **NIST ACTS** automated computer time service several years ago - and so we understandably feel a bit parental about the service. You can dial this data service with any number of available shareware packages and actually synchronize your PC clock to the NIST time service to within a hundredth of a second at no cost other than long distance charges - and it's a local call from anywhere in the Denver area.

We think the Colorado Alliance of Research Libraries is probably the finest online card catalog in the world - over five million entries. Available over the Internet at pac.carl.org, here in Denver it's a local dialup. The **QUICK EPICENTER DETERMINATION** service monitors earthquake/seismological data worldwide and what they know, you know if you know to dial em. The **SPACE ENVIRONMENT SERVICE CENTER** has provided solar flare and geomagnetic data for years. I've never figured out what

anyone does with this data but it has to do with radio propagation conditions and I suppose that's important.

And if you just want to see a kid have a good time running a BBS, and one of the best at that - on no money, check out Mark Cook's **WIZARDRY BBS**. As I recall, you could overdose on online games right there in one place.

In the wierd name examination, **Monkey Boy BBS**, **Fat City BBS**, **Doogieboard**, and **Operation Mind-Crime** are contenders. But there is something attractive about the contrast between technology and biology. We're forced to declare a tie for wierd title between **THE COW CLUB** and **CAT-PAN BBS**. Cute has to go to Randy and Christine Bean's **BEAN'S TALK BBS**. And with regards to special topics, nothing is more specialized than Terry Rune's **BIRD INFO NETWORK** - everything you ever wanted to know about cockatiels - but were afraid to ask.

STOCK OF THE WEEK

ONLINE BROKERAGE COMPETITIVE RATES

For A Free Brochure
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300 - 9600 Baud Modem
(212) 809-1160
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24 Hours Weekends

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(800) 223-6642 (Voice)

In New York Call
(212) 908-4550

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If you are a professional technical support specialist, consultant, security analyst or maintenance and repair technician, you may be eligible for the McAfee Associates' Authorized Agent program. Authorized Agents represent McAfee Associates to their customer base, and provide virus scanning and certification services, virus-prevention maintenance, virus policy development and emergency containment and removal.

If you are the best in your field; if you have a fluent understanding of virus issues and McAfee products; if you are conversant with electronic software distribution philosophies and techniques; then you may be eligible. For an application contact:

For North American Agents:

John Bitow
McAfee Associates
1900 Wyatt Drive, Suite 8
Santa Clara, CA 95054
Tel: 408 988 3832
Fax: 408 970 9727
BBS: 408 988 4004

For International Agents:

Jim Lynch
McAfee Associates
4423 Cheeney Street
Santa Clara, CA 95054
Tel: 408 988 2137
Fax: 408 970 9727
BBS: 408 988 4004

DENVER COLORADO

LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - JANUARY 1992

SERVICE	PHONE	DESCRIPTION	MODEM	SOFTWARE	SYSOP
(M.A.C.E.)	303-797-8090	Metro Area Computer Enthusiasts-Genealogy software/message	9600	RemoteAccess	Ken Zen
21st Century BBS	303-840-9862	Online games, MetroNet(540), FidoNet(524)	9600	RemoteAccess	Jack Horan
5150 (Fifty-One Fifty)	303-337-0524	.....	9600	Telegard	The Grunt
8th Sea, The	303-252-9235	No Files, Many Echos, FidoNet(610)	2400	RemoteAccess	Rod Lamping
Abe's Hideaway	303-843-9905	Online games, Net96(140.0)	2400	Telegard	Abe
Aces High BBS, The	303-366-8159	DeMolay, Franklin/Apple support, Aces High Computer Club	2400	GBBS Pro	Jeff/Steve Brothers
Adelante	303-443-8292	Latin (esp. Central) American Issues, FidoNet(93)	9600	Maximus	Zhahai Stewart
Alchemist BBS, The	303-674-2680	Online games	.....	RemoteAccess	Line Nolse
Aleph Null BBS, The	303-938-8903	Numbers Applications, Math Topics, Spreadsheets & templates	2400	TelxHost	Andy Ellenberger
Antarctic Outpost, The	303-433-1742	Online games	2400	RemoteAccess	"The Penguin"
APS Net	303-693-6737	Aurora Public Schools Teen Msgs	2400	GBBS Pro	Glen Blanco
Arvada 68K BBS, The	303-424-6208	Amiga Support, Adult areas, FidoNet(224.0), UseNet(csnla68k)	2400	Trapdoor	Reid Bishop
Assassin's Guild, The	303-722-6881	Conversation, Role Playing Games, Online games	2400	WWIV	"Kingslayer"
Atari Club's BBS, The	303-343-2956	Atari Club of Denver & Starfleet User Group Z'net (Atari online mag)	2400	.....	.....
Aurora Trading Post, The	303-766-2317	Online games, Adult areas	2400	Telegard	Robert Bush
Aurora, City of	303-340-1844	Job Listings, City employee mail system	.....	Chairman	Dan Howe
Back Burner BBS, The	303-697-8156	Amiga - Publishes The Back Burner Bulletin (AMIGA's in Denver)	9600	C-Net	Bob Maple
Barkeep's Place	303-499-6223	Online games	2400	WWIV	"Barkeep"
BatCave	303-252-0735	Commodore	.....	PRYS	.....
Battle Bridge, The	303-989-4533	CFRNet, Adult Areas, Online games	2400	RemoteAccess	"Capt. Ambush"
Bavarian's GastHaus BBS	303-367-5877	Online games	2400	BBS Pro+	.....
Bean's Talk BBS	303-420-0425	.....	2400	GT Power	Randy/Christine Bean
Beaver's Place BBS	303-457-1039	CFRNet(208)	2400	RemoteAccess	"Beaver Cleaver"
Big Boy's BBS	303-458-3832	GTNet(046/005), Adult areas	2400	GT Power	"Big Boy"
Binaca Blast I-The Silo	303-755-8917	ANSI Anarchy Society, Online games, Adult areas	2400	Telegard	"Skywise"
Bird Info Network	303-425-9267	Exotic birds	9600	TBBS	Terry Rune
Bloodbath BBS	303-699-5729	Gay community, FidoNet(432)	2400	Telegard	"Mad Poo Bandit"
Blue Parrot Cafe BBS	303-333-4897	Services and contacts for self-employed, Bicycle echo	2400	RemoteAccess	Stan Wagner
Board of Directors, The	303-933-3016	Boardwatch Magazine - USA Today	2400	Wildcat	Michael Kay
Boardwatch Online Info	303-973-4222	UseNet, Online Games, MetroNet(301), FidoNet(301)	9600	TBBS	Jack Rickard
Bohemia	303-449-8946	Apple IIgs - Vulgar Language!	2400	QuickBBS	Jason Taubman
Bone Cellar	303-457-0388	RIME Times, RelayNet	9600	GBBS Pro	Rick Holt
Borealis Computer Systems	303-750-7136	Amiga support, FidoNet(121)	9600	Wildcat	Dave Schimmel
Boulder Amiga Users Group	303-939-9923	Boulder Library Access	2400	Xenolink	Alan Bland
Boulder Public Library	303-444-2057	Online games, Private Net, FidoNet(216)	2400	Tandem	Main Library
Bowling BBS, The	303-460-8649	Adult areas	2400	Opus	Rick Mayfield
Box's Cabin, The	303-424-9185	.....	2400	RemoteAccess	"The Box"
Brewery BBS, The	303-321-2810	.....	2400	RemoteAccess	ChristopherBrewer
Britian	303-438-1357	Adult MatchMaking	2400	ShmeeBBS	"Silver Fox"
Brokerage, The	303-796-9721	Online games, Adult area	2400	RemoteAccess	"The Broker"
BS-BBS	303-799-8411	.....	2400	RemoteAccess	"Dude"
Bullseye Online	303-367-0673	FidoNet(334)	9600	RemoteAccess	Robert Russell
Business Connections BBS	303-692-9167	Online games	9600	Telegard	"Nympho"
Busted Flush	303-343-6285	.....	2400	UltraBBS	Glenn Gulshall
Byte Grinder	303-426-6230	At SERVICE prompt, enter "Demolink"	.....	.....	.....
Byte Magazine (via BIX)	303-220-0328	CAD support(Mouse driven BBS), Online games	2400	OmegaBBS	Dave C. Springer
CADre Main	303-696-7982	Online games	2400	GT Power	John Fiedheim
Cappy's Tavern	303-449-6353	Colorado Alliance of Research Libraries - 5 Million Records	2400	Tandem	CARL Systems
CARL	303-863-1350	.....	2400	.....	.....

Casino, The	303-693-7335	Commodore 64	2400	NewImage	
Calpan, The	303-494-4825	Commodore Amiga Telecommunications Posts And News	2400	C-NET	Charles Holt
CBFC	303-341-0129	Colorado Broadcast Frequency Coordination Committee - FidoNet(42)	2400	OPUS	Jeff Brothers
Chaos Manor BBS	303-649-9550	Atari	2400	Telegraph	"Uncle Buck"
Charlotte's Web	303-367-0668	Online Games	2400	Carina II	"Charlotte"
Chibo City	303-450-7309	Support for pastors/ministers or church workers, FidoNet(516)	2400	BoardLink	
Christian Connection	303-337-5737	Ham Radio, Electronics, Cooking, Fidonet(117),	2400	RemoteAccess	Shirley Pope
Circuit Board, The	303-666-0302	Private	2400	RemoteAccess	Jack Dean
Circulation Dynamics BBS	303-440-7425	Online software sales	2400	PCBoard	Jess Watkins
Cloak and Dagger BBS, The	303-340-0597	Online games, ShireNet(6969/2), FidoNet(527), Adult areas	2400	WWIV	Stephen Larson,
Colorado Cowboy's Support	303-733-3216	Online games, Amiga Support, FidoNet(469 & 441), CFRnet(105),	2400	GT Power	John Finnicum
Colorado Frontier BBS	303-361-9801	Username: ONLINE	2400	RemoteAccess	"Kodiak & Kathy K"
Colorado Mountain OpSys	303-322-4078	50+ Message Echos, Online games, FidoNet(420)	2400	RemoteAccess	Kevin Trutt
Colorado Online Business Network	303-866-5463	ASP shareware, HAM, Astronomy, FidoNet(666)	2400	MicroVAX	LT Gov Mike Callihan
Colorado State Judicial BBS	303-831-1704	FidoNet(767), Color Computer support, Online games	2400	RemoteAccess	Scott V. Hopta
Comm Post, The	303-534-4646	Computer Information - Community News - Entertainment	2400	TBBS	Brian P. Barree
Commerce City Computer Connections	303-289-2968	Colorado Apple Compatible Home Enthusiasts	2400	RemoteAccess	Fred Weigel
Community News Service	303-457-4000	Local Computer Equipment Retailer FidoNet(41)	2400	MAJOR BBS	Steve
Computer C.A.C.H.E	303-745-4960	dBase, Clipper, FidoNet(318.0), National Job echos	2400	GBBS Pro	Gary Edwards
Computer Care Corp. BBS	303-771-8107	Online games	2400	Opus	John Bilbro
Computer Consulting	303-973-1002	Sports Information and Statistics	2400	QuickBBS	Jim Bucks
Computer Know How	303-279-0224	File Library - \$75 per year.	2400	RBBS	John Holmgren
Computer Nuts Network	303-394-3657	Online Games	2400	RemoteAccess	Laura Breiller
Continental Basketball Assoc	303-329-0159	Online games	2400	TBBS	Jay Ramsdell
Control Systems RBBS	303-458-6248	Online games	2400	RBBS	"Sierra"
Couch Potato BBS	303-699-7965	Online games, CFRnet(101), FidoNet(737), AdultLinks(30)	2400	Apple II	"Brian One"
Coven, The	303-777-2911	Online games	2400	Wildcat	Craig Steele
Cow Club, The	303-422-2822	Colorado Society of Hospital Pharmacists	2400	TBBS	Mark Bradford
Craig's Place BBS	303-288-1463	MODEM News, FidoNet(61.0), MetroNet(421)	2400	Telegraph	"The Golden Unicorn"
Crossroads, The	303-499-0457	Online games, Runs on Novell network	2400	RemoteAccess	"Trashy & Clover"
Crystal Caverns, The	303-232-8145	FidoNet(418),	2400	RBBS	Stephen Bartlett
Crystal Rose, The	303-777-5420	Denver MENsa Telecomputing Information Access	2400	RemoteAccess	Jonathon Wood
CSHP ON-LINE	303-791-3402	R:Base, Scanners, R:Base Users Group, CFRnet(112), FidoNet(440)	2400	RBBS-PC	Ron Costa
CyberZone BBS, The	303-394-2322	Ham, Scanner	2400	Opus	Joe Dehn
Data-Link Computers	303-254-8073	Gay Issues, FidoNet(909), GayCom(104)	2400	GBBS Pro	Charles Pello
Deinbase	303-972-6575	Goodwill Industries of Denver/Human Services/Disability-FidoNet(231)	2400	QuickBBS	Paul Fullerton
Dememita	303-986-9610	Adult conversation, large game collection	2400	TBBS	Hugh Casey
Denver Area R:Base Users Group	303-422-2149	Gay community	2400	Sonic BBS	Chris Rand
Denver Computer Investors BBS	303-499-8852	Denver Consortium of Sysops, SwashNet, KinkNet	2400	TBBS	James Craig
Denver Enterprise BBS, The	303-526-7376	CFRnet(109), Adult areas, Online games	2400	Telegraph	Gwynn Rogers
Denver Exchange, The	303-623-3691	Macintosh BBS - Cows of the Week	2400	RemoteAccess	"The Bartender"
Denver Goodwill BBS, The	303-650-7732	Pagan echos, FidoNet(11)	2400	Wildcat	"RockyTop"
Dew Drop Inn, The	303-680-6384	Commodore 64 - Norse/Viking Theme	2400	Telegraph	Mordak
Different Drummer BBS	303-752-2219	Card Catalog for Arapahoe Library	1200	Telegraph	Steven Crandall
Digital Wasteland	303-431-8821		9600	RemoteAccess	"Dr. Bizzare"
Discordian Society, The	303-933-3472		1200	Hermes	TOT
Doctor's Office, The	303-766-9762		2400	GT Power	Alex
Dog House, The	303-699-7603		2400	Telegraph	The Dragon
Doogleboard	303-499-8430		2400	OPUS	Russell Anderson
DOS n' Son's BBS	303-466-9277		1200	Image	Carl Hellner
Dragon's Lair BBS, The	303-364-3930				
DragonFriend's Place	303-782-9547				
Drakkar Outbound BBS	303-469-3265				
E.Z. Cat	303-344-5030				

DENVER COLORADO

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SERVICE	PHONE	DESCRIPTION	MODEM	SOFTWARE	SYSOP
Eagles Nest BBS	303-933-0701	FidoNet(315), MetroNet(231), CFFNet(106.0)	9600	QuickBBS	Ron Olsen
EJC Data Systems & Detective Agency	303-366-2473	Missing Children Echo, GT Net	2400	GT Power	Sean Burke
Electronic Library Exchange	303-935-6323	Blind, Christian, Ham Radio, FidoNet(810.0)	9600	QuickBBS	Phil Scovell
Emerald City BBS	303-427-1471	FidoNet(214)	2400	RemoteAccess	Daniel Osborn
Erana's Peace	303-743-0780		9600	WWIV	"Aldur"
eSoft, inc. Software Support BBS	303-699-8222	Home of TBBS bulletin board software and related products	9600	TBBS	Phil Becker, eSoft
ET'S Place	303-239-8696	Online games, Adult files	9600	Telegraf	"Clover"
Event Horizon, The	303-429-0597		2400	GT Power	
Falcon's Eyrie	303-426-6614			Telegraf	
Fantasy Mountain	303-922-5730	Rocky Mountain Disability Net- Deaf/Handicapped Issues Fido(809)	9600	RemoteAccess	Steven Shockley
Far Point Station, The	303-458-7164	Digitech Computer Systems - FidoNet(90.0)	2400	Opus	Michael Keele
Far Side, The	303-841-7783	Arniga support	9600	Paragon	Rad & Mad Scribbler
Fast Track	303-922-0766	MetroNet(570), FidoNet(450), Online games	9600	RemoteAccess	Todd C. Nelson
Fat City BBS	303-431-8807	Adults Only! Online games, CFFNet(200)	2400	RemoteAccess	David Landsman
Fifth Dimension, The	303-980-1066	Adult areas, CFFNet	9600	RemoteAccess	Jeff Sepulveda
File Cabinet, The	303-430-4106	Extensive file area, FidoNet(427)	9600	Opus	Larry Adamson
Finish Line, The	303-290-8055	Fitness, Running	9600	RBBS	Bill Ankelle
Fire House BBS, The	303-371-2967	FidoNet(710), CFFNet(204), Adult Links(27), Online games	9600	RemoteAccess	John Rickabaugh
Fireside Chat BBS, The	303-449-8427	Commodore 64	9600	Wildcat	John W. Cooper
Fishin' Hole, The	303-666-9885		2400	Color-64	"Ddan"
Four Wheeling BBS, The	303-469-4954		2400	STadel	"The Jeepster"
Fred's BBS	303-233-1316	Adult Areas, Online games, FidoNet(437), CFFNet(102), Adult Links(25/26)	2400	RemoteAccess	Fred Schupner
Free Info eXchange	303-699-1516	Echo Conferences, FidoNet(89.0)	2400	OPUS	Charlie Frnka
Future World	303-799-3554	Online games	2400	Telegraf	"Bo Jangles"
Galaxy Express Three-Nines, The	303-231-0990	Jefferson High School		QuickBBS	Pat Einheber
GateKeeper	303-755-4210	Online games	2400	GBBS Pro	Gateway HS
Gay 90's	303-477-7346	Gay community		RemoteAccess	
Gay Community Online Magazine	303-795-1215	Gay Issues And Support, FidoNet(19.0)	2400	FIDO	Steve Raymond
George's Computer Room	303-344-9547	ASP Shareware	9600	PCBoard	George Clifford
Good Neighbor BBS	303-425-5347	Online games	2400	WWIV	Don Hircok
Grave Diggers Tomb	303-452-4383		9600	Turbo Board	
Grotto Lounge BBS, The	303-421-6965		9600	TBBS	Robert Ton
Happy Land	303-447-3934	MAC Support, Online games	9600	Hermes	"Dr. Happy"
Hawknet	303-696-3803	Prairie Middle School, Cherry Creek School District	2400	GBBS Pro	Doyle Oswald
Heaven's Gate, The	303-792-5743	Online games, FidoNet(434.100)	2400	RemoteAccess	Vicki Weatherford
Hometown	303-680-6390			Executive Host	
House of Dawn	303-696-6392	Online games, Fidonet	9600	Telegraf	Haemin Rapp
HP Haven	303-671-5976		2400	Telegraf	Mark Willecke
Hyperwave Labemth	303-988-0659			Telegraf	"Bad Connection"
Ice Mountain	303-237-9072	Green Mountain High School		QuickBBS	"IceHawk"
InterConnect	303-797-0296	Windows support, CFFNet(108), FidoNet(60)	9600	QuickBBS	Jim Vorheis
Isle Of The Winds	303-680-7562		2400	WWIV	"Belgarth"
JAB	303-670-3539	JAB- Just Another Board	2400	Telegraf	Eric Marschner
Jaguar's Networking Labs	303-377-2371	On-line coupons, HAM, FidoNet(477), MetroNet(500), Usenet	9600	QuickBBS	Jeff Tansly
Jayhawk BBS	303-360-5524	FidoNet(528), Online games	9600	Wildcat	Bill Staab
Jehosaphat's Cave BBS	303-467-9397	Online games, FishNet(306.0), Net96	9600	Telegraf	"Mr. Big"
Joke Board, The	303-460-8020	Jokes, Adult area		RemoteAccess	"The Mentor"
Just Plain Fun BBS, The	303-424-2448	Online games	9600	RemoteAccess	James McPherson

Kat's Korner	303-696-0921	Online games	2400	Custom	"KevKat"
King's Market Bookshop	303-665-6091	Large shareware & graphics collection, Ham, Adult Areas, FidoNet(115)	9600	TBBS	Jim & Karen Burt
L&L Support Board	303-420-3568	Primary support for GBBS Pro BBS software for Apple II	2400	GBBS Pro	Lance Taylor-Warren
Laboratory, The	303-287-5274		9600	GBBS	
Lakewood Police Department	303-987-7388	Criminal Intelligence Unit - Law enforcement issues	1200	RBBS	Larry Scheideman
Laser BBS	303-693-8891		2400	Telecard	"Jack Hack"
LaserWriting, Inc.	303-741-4122	Laser Printing/Scanning, file conversions, pickup & delivery	9600	Mac	DPSC
Last Outpost BBS, The	303-693-6160	Adult areas, Online games	2400	RemoteAccess	Lt. Commander Data
Late Night Prowl	303-494-4173				
LDS Reading Room, The	303-343-1665	Online games, FidoNet(513)	2400	QuickBBS	Eric/Diane Smith
Lensman BBS, The	303-979-8953	Fantasy & Science Fiction	2400	GT Power	Greg Brant
Lepard Lair BBS	303-399-9052	Messages only, FishNet(), Net96(100.0), SwashNet()	9600	Telecard	"Lepard"
Lesley College Communications Net	303-526-2046	FidoNet(232), MetroNet(560)	2400	GBBS Pro	George Willett
Little Byte BBS	303-320-4153	Online games, FidoNet(523)	9600	Opus	Tom Johansson
Lizard's Lounge, The	303-745-6193	Online games, FidoNet(517)	9600	Maximus	Lawrence Sullivan
Lone Star BBS	303-355-4576	Online games, SwashNet(196)	2400	Telecard	"Outlaw"
Lost Horizons	303-430-0711	"The Guardian" Online games, FidoNet(757)	2400	Telecard	Dave Fritzler
LoveBoat BBS, The	303-373-5370	Adult areas, Online games, FidoNet, Adults only!	9600	Telecard	
M&D's Travelling Circuits	303-657-0126	Local community & Family oriented message system	2400	CC-BBS	Marshall Barry
MAGIC BBS	303-791-8732	MAGIC=MachineTech's Amazingly Great Information Center	9600	Hermes	Steve Sande
Magic Mama's Orb	303-320-4139	Online games	2400	Telecard	Dave Tessler
MASC Library I	303-497-5848				
MASC Library II	303-497-5567	PC-SIG Library of shareware on CD-ROM	2400	RBBS	
Max Manlove's BBS	303-863-8110	Support of Denver's Gay & Lesbian Community, FidoNet(431),	2400	RBBS	"Max Manlove"
Maximum Security	303-232-5977	Commodore 64	2400	EBBS	"The Warden"
Maximum Sentence BBS	303-759-1848	Online games, CFRNet(119)	9600	RemoteAccess	George Grunwald
Micro Wire BBS	303-752-2943	Mile High Computer Resource Organization	2400	TBBS	
MicroLink -2 (Minus Two)	303-753-9710	Message areas, Eliza online, FidoNet(316 & 416)	2400	TBBS	Paul Smith
MicroLink B	303-978-9229	FidoNet(), ECHO Conferences, PC-SIG (2400+), USA Today	9600	TBBS	Girard Westenberg
MicroLink D	303-237-8575	Software (PC-SIG disks 1-2200), Newsletters, FidoNet(711)	9600	TBBS	John Maxwell
MicroManiac BBS	303-673-9470	Vast software collection, Postal Chess, Journals	9600	Wildcat	Tom Gettys
Middle Earth BBS	303-341-9521	Online games, Adult areas, FidoNet(434), Shiren(6969/0)	9600	RemoteAccess	Chris Millensifer
Midrash	303-289-8864	Messianic Judaism, Greek, Hebrew	9600	QuickBBS	
Mobius Continuum	303-466-5368		2400	Telecard	
Mom's BBS	303-690-4913	Apple II		PrimeBBS	
Monkey Boy BBS, The	303-469-7161	FidoNet(43.0)	9600	RemoteAccess	Todd Hill
Montana BBS	303-337-3771	Online Games, Adult areas	2400	Telecard	"Big Sky Country"
Mountain Man TI	303-797-6783	Denver Area TI Users Group	9600	Citadel-86	Roy Barte
Mr. Q's Lair	303-290-0945				"Mr. Q"
Mum's BBS	303-278-3288	(Silnes) Gay community	2400	QuickBBS	Vaugh Mumpower
My Buddy	303-861-7528			Oracom-Plus	
NCR Employee's BBS	303-692-7224	Japanese Animation, Best ANSI Opening screen in Denver?	2400	Wildcat	Tom Fucis
Neo-Tokyo	303-465-5228	Rocky Mountain GT Power Club	9600	WWIV	Kaneda Osheito
NetComm BBS	303-730-6709	Games and only games newer than 1991[SIC]	9600	GT Power	Bill Watts
NetherWorld BBS, The	303-693-7344	New Age, Health, Conspiracy	2400	Telecard	J. Payne
New Age, The	303-366-1106	Mile-High Amiga User's Society	2400	TBBS	Hal & Fran
Ninth Portal, The	303-470-0304	National Institute of Standards & Technology, Automated Computer Time Service	1200	Skyline	Rick L. Henderson
NIST ACTS Time Service	303-494-4775	Online games, FidoNet(230)	9600	Wildcat	Rodney Derr
No Weyr	303-466-2012	Commodore 64	2400	C-Net	
Nobody's Home	303-368-9561	UHC School of Nursing, Nursing Research FidoNet(52)	2400	RemoteAccess	Laura Gillespie
Nurselink	303-270-4936	NVFC= National Volunteer Fire Council	9600	RemoteAccess	Ken Westlund
NVFC Firewatch	303-452-0105	Internet/Usenet Access, Local orgs 2.3 GB	9600	PDP-11	Univ Denver
Nyx	303-871-3323	BEST WOMEN'S COMPUTER BULLETIN BOARD (Westword 6/1/91)	2400	RBBS	Denise Beahm
Oak Tree, The	303-333-8847				
On My Own	303-745-8594				

DENVER COLORADO

LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - JANUARY 1992

SERVICE	PHONE	DESCRIPTION	MODEM	SOFTWARE	SYSP
On-Line Consulting	303-449-5251	FidoNet(45)	9600	TBBS	Lee Lasson
One World...One People	303-238-6976	Safeway Grocery Service	1200	RemoteAccess	John Robben
Online Shopping Service	303-442-5125	AMIGA ONLY ANSI w/IBM graphics ONLY	2400	Paragon	The Mad Scribbler
Operation Mind-Crime	303-341-7148	Friends of Osho (Bhagwan Shree Rajneesh), FidoNet(207)	2400	OPUS	Terry Mooster
OshoNet USA	303-449-7274	Online games	2400	TBBS	Adam Hudson
Outer Edge, The	303-680-6195	Adult areas	2400	WWIV	"Dor Jammer"
Outer Limits, The	303-693-5061	CFFNet(118), FidoNet(525.1), MetroNet(450)	9600	RemoteAccess	Mike Pratt
P-N-P BBS System	303-752-9641	Study of aerial anomalies (UFOs), text library, Fido(605)	9600	RemoteAccess	Mike Keithly
ParaNet Alpha	303-933-7184	Study of aerial anomalies (UFOs), text library, Fido(422)	9600	QuickBBS	Michael Corbin
ParaNet Information Service	303-431-8797	Extensive shareware library, FidoNet(904)	9600	WildCat	Forufo Pazzuzio
Pazzuzio's Palace BBS	303-680-6476	FidoNet(512), Adult area	9600	Maximus	Phil Kaiser
PC Info Services	303-789-4610	Solence Fiction, Jokes	9600	Maximus	Dennis Peacock
Peacock's Nest, The	303-680-0509	Morman, Online games, Net96(438.0), MetroNet(551)	2400	QuickBBS	M.S. Maupin
Pern	303-341-7868	Adult areas, FidoNet(28 & 128)	9600	QuickBBS	Eugene Humbert
Phoenix's Egg, The	303-287-8267	PC Magazine Utilities, Journals & Newsletters, FidoNet(607)	2400	UltraBBS	Craig Baker
PineCliffe	303-642-0562	Mouse Capable, Online games	2400	QuickBBS	David Alderman
Pink Flamingo BBS, The	303-497-3934	EDP Audit, Computer Security, Computer Crime, Virus/Trojan Horse	2400	OmegaBBS	"Sledge Hammer"
Polar Bear BBS	303-344-2734	Online games	2400	TBBS	Bob Voorhees
Professional System, The	303-740-2223	Online games	9600	Telecard	"Mister Zen"
Psychone BBS, The	303-985-8942	Online games	2400	Telecard	Phillip Mahn
Quality BBS, The	303-470-9152	National Earthquake Info Center Class:NEIS Username:QED	1200	VAX/VMS	Mike Stolp
Quasar TNC	303-220-8510	Adult Areas, Online games, FidoNet(901)	2400	RemoteAccess	Bruce Presgrave
Quick Epicenter Determinations	303-279-2062	Support for Ram's Island software, FidoNet(333), ASP shareware	9600	Wildcat	Michael Di Paulo
Rain Forest, The	303-394-2155	FidoNet(529)	9600	Wildcat	Dr. H. Rudy Ramsey
Rainbow Missions BBS	303-938-9654	FidoNet(424), MetroNet(400)	2400	QuickBBS	Mike Graft
Ram's Island	303-841-6269	Online games	2400	WWIV	Jason Steck
Random Access Technical Support	303-752-5060	Denver FORTH Interest Group Forth programming language, ForthNet	2400	PCBoard	Spencer Hansen
Ready Room	303-755-1681	Online games, Adult files (GIF & Animation)	2400	Wildcat	Jack Woehr
Realm of Lost Souls	303-680-7888	Ham, Sports	2400	GT Power	Matt Barber
Realtime Control & Forth Board	303-278-0364	Computer Consultants, Denver Clipper users group FidoNet(58), K12Net(	9600	RemoteAccess	"Lather"
Red Dragon, The	303-791-9166	Home of RIBBS software for Tandy CoCo, FidoNet(54)	2400	Image	Charlie Bass
Refrigerator Door, The	303-421-4149	Online games	2400	RiBBS	"The Grunt"
Regency DataSource	303-972-1222	Matchmaking, Adult area, Online games, FidoNet(799),	9600	TurboBoard	Ron Bihler
Regimental Headquarters	303-375-9556	Genealogy, FidoNet(330), LDSNet(400)	9600	TBBS	Ron Debug
RIBBS HQ	303-343-6707	Gay community	2400	RemoteAccess	Larry Kayser
RingWorld BBS, The	303-699-0402	FidoNet(122)	2400	Oracom	Charles Simpkinson
Rocky Mountain Information Exchange	303-791-4330	Fishnet(103), Online games, Net96(110), SwashNet(602)	2400	Maximus	Russ Logsdon
Root Cellar Too	300-770-3217	Role playing game (Dragon Lance)	9600	Telecard	Robert Mashlan
Roscoe's Place	303-860-9760	Echo Conferences, Cooking, Online games, FidoNet(518.0)	2400	Telecard	Don Johnson
RWare Software HQ	303-443-6539	FidoNet(99.0)	2400	WWIV	"Silvra"
Satan's Den	303-665-2306		9600	WWIV	"Swamp Rat"
Saturday Knights BBS, The	303-363-8775		2400	WWIV	Bob Lester
Sea of Scariet Waters, The	303-430-9648		9600	QuickBBS	Dennis C. McKinney
Seven Eleven	303-699-7603		2400		
Shadowmire Keep	303-843-9721		2400		
ShipWreck Cove, The	303-841-1943		2400		
Silver Hammer BBS	303-367-9701		9600		
Silver Streak BBS, The	303-465-2831		2400		

Skyline BBS	303-457-0320	.....	2400	ForReM	Dave Lloyd
Smokey Net, The	303-690-0192	.....	2400	Hermes	
Snake's Den, The	303-427-2210	.....	2400	Telegard	
SnarQuest I	303-973-7852	.....	2400		John Denny
SnarQuest V - The Tower	303-973-0625	.....	2400	QuickBBS	Radford Walker
SnarQuest VIII - The Mountain	303-460-9305	.....	2400	QuickBBS	Gary Lamontagne
Sound Doctrine BBS	303 680-7209	.....	2400	TBBS	Tim Williams
Sounding Board BBS, The	303-444-7942	.....	9600	Wildcat	Pat Nefos
Space Environment Service Center	303-497-5003	.....	2400	Custom	NOAA
Space Network, The	303-494-8446	.....	2400	TBBS	Tom Meyer
Star Door I	303-321-8164	.....	2400	Telegard	"Mr. X"
Star Door II	303-782-9475	.....	2400	Telegard	"Mr. Ed"
Star Jammer BBS	303-364-0866	.....	1200	Image	"Jammer"
Star Trek	303-252-0863	.....	2400	Image-64	"Capt. Spock"
STOIC Financial BBS	303-940-7746	.....	2400	WildCat	
Straight Up BBS	303-466-0119	.....	2400	Telegard	"Turbo"
Sunstroke BBS, The	303-680-4563	.....	9600	GT Power	Louis Moritzky
Supernature BBS	303-670-9392	.....	2400	Telegard	"Psuedo Echo"
System Support BBS	303-469-9359	.....	9600	PCBoard	Barry Young
TBBS Net	303-699-9248	.....		TBBS	Phil Becker
Tek Head BBS	303-650-2257	.....		QuickBBS	Tom Southerland
Telepeople	303-426-1942	.....	2400	TBBS	Terry L. Travis
Terra Main	303-830-8098	.....	2400	WWIV	"Cappy Kirk"
This End Up!	303-429-2445	.....	2400	Opus	Steve Carnes
Top of the World	303-756-5292	.....	2400	Hermes	"Mirrorman"
Top Secret	303-841-1943	.....			"Swamp Rat"
Transmitter, The	303-798-5241	.....	2400	Carla II	"The Transmitter"
TravelBank, The	303-671-7669	.....	2400	TBBS	Jay Melnick
Trekker World	303-671-9051	.....		GBBS	
Trout Unlimited Bulletin Board	303-440-5842	.....	2400	Fido	Walter Jessel
TV Land BBS, The	303-366-7985	.....	2400	4D-BBS	Eric Schultz
Ultra-Z	303-797-3805	.....	2400	Telegard	Jason Adams
Universe Next Door, The	303-344-3955	.....	2400	Telegard	
University of Colorado BBS, The	303-786-0566	.....		Hermes	Chad Wachs
Unknown BBS, The	303-759-2949	.....	9600	RemoteAccess	Bill Bacon
ValueComm BBS	303-388-0336	.....	2400	GT Power	Taylor Albrecht
Vault, The	303-779-4253	.....	9600	RemoteAccess	Craig Steiner
Vet Set BBS, The	303-690-3218	.....	9600	GAP	Alfred Peterson
Village BBS, The	303-292-5006	.....	2400	QuickBBS	Karl Oppenheimer
Voyager II	303-279-2534	.....	2400	GT Power	Edward Shepard
Vulcan Way, The	303-979-9418	.....	9600	Telegard	Mark Lamutt
Vulgar Unicorn, The	303-680-8622	.....	2400	Telegard	
WatchDesk, The	303-450-0822	.....	9600	RemoteAccess	Emit Hurdelbrink
Watership Down BBS	303-364-0472	.....	2400	RemoteAccess	Doug Bales
Welcome Home BBS	303-839-8665	.....		RemoteAccess	Dave Wilson
WestWind Service's BBS, The	303-758-7589	.....	9600	RemoteAccess	Thomas Kristenen
Weyr, The	303-790-4266	.....	9600	Opus	Ken Shimko
WildCard BBS	303-252-0491	.....	9600	RemoteAccess	Frank Sexton
WinterMule AI	303-440-516	.....	2400	Hermes	
Wizard's Chest BBS, The	303-761-4512	.....		MaxiHost	Norm Wilkin
Wizardry	303-674-1305	.....	9600	RemoteAccess	Mark Cook
World of Two Moons	303-843-0739	.....	2400	Telegard	
World Peace BBS	303-320-4822	.....	2400	RemoteAccess	Bucky Carr
Yawning Portal, The	303-744-0861	.....		RemoteAccess	Andrew Spence

BOARDWATCH LIST OF BBS LIST KEEPERS

BBS LIST TOPIC	LIST AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Republic of South Africa	Henk Wolsink	Catalyst BBS	(041)34-1122
Darwin National BBS List.....	Meade Frierson.....	USBBS Update Line.....	(202)547-3037
BBS With Handicapped Focus	Bill McGarry.....	Handicap News BBS	(203)337-1607
Seattle AC 206/West Washington.....	Bob Dinse/Nanook.....	Eskimo North	(206)367-3837
Autocad Related BBS	Jason Osgood	Alacrity BBS.....	(206)643-5477
Kitsap County Washington.....	Michael Schuyler.....	Quicksilver BBS.....	(206)780-2011
Maine BBS.....	Eric Rodzen.....	MaineNET BBS	(207)767-1273
Astronomy/Space BBS	John Pickens.....	Starbase III BBS	(209)432-2487
NY/NJ/CT/PA/DE		Network One BBS	(212)628-5486
Graphical User Interface BBS.....	David Shapiro.....	The Gooley (GUI) BBS.....	(212)876-5885
Southern California	Mike Hefferman.....	SOCAL Corner.....	(213)422-7942
Open Access UNIX Sites.....		LGNP1 (login:GUEST)	(215)348-9727
Area Code 609 - New Jersey.....	Ron Brandt	Satalink BBS.....	(215)364-3324
Area Code 215 - Philadelphia.....	Ron Brandt	Satalink BBS.....	(215)364-3324
Cleveland Area 216.....	Eric Rickin	Wine Cellar	(216)382-2558
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Baltimore Area 301	Phillip Bailey.....	Baltimore BBS News	(301)633-7870
Medical Issues BBS.....	Edward Del Grosso	Black Bag	(302)731-1998
Denver Colorado AC 303.....	Bob Voorhees.....	Professional System.....	(303)740-2223
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
ASP BBS Member List.....	Bob Ostrander	PBS-BBS.....	(317)856-2087
Engineering Related BBS	Arthur Petzelka	Computer Plumber	(319)337-6723
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Atlanta Area 404	Online Atlanta Society.....	OASIS.....	(404)627-2662
Atlanta Area 404	Rodney Aloia	INDEX System.....	(404)924-8472
South Florida Area 305/407.....	Eric Thav	Silicon Beach BBS	(407)276-3750
Orlando Florida AC 407	Matt Drury	London BBS	(407)859-2243
Milwaukee Area 414.....	Jim Belot	The Keep BBS.....	(414)372-3488
Arkansas Area 501.....	Bob Underdown	The Gaslight BBS	(501)444-8420
Portland Oregon BBS	Lisa Gronke.....	DawGone Disgusted	(503)297-9145
New Orleans BBS List	Jeff Jones	Southern Star BBS	(504)885-5928
Austin Area BBS List AC 512.....	Michael Allen Menoskey	=ACE*BBS=.....	(512)258-9989
Selected BBS.....	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
List of Gay/Lesbian BBS.....	Eric Blair	S-TEK BBS	(514)597-2409
The List National BBS List.....	James Toro.....	PDSLO (The List)	(516)938-6722
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM.....	Wolverine BBS	(517)695-9952
Wisconsin 608.....		JW-PC Dataflex.HST.....	(608)837-1923
South Jersey Area 609	Dave Schubert	The Casino EBBS	(609)561-3377
New Jersey Area 201/609/908.....	Wayne R. Morton	Praedo BBS	(609)953-0769
MIDI Music BBS.....	Lee Smith	MIDImaze BBS	(615)877-5528
Massachusetts Area 508/617.....	Dave Goodenough.....	Wyzard's Castle.....	(617)825-3135
San Diego, CA AC 619	Ron Dipold	Computer's Edge.....	(619)573-1675
Apple II BBS with Internet con	Morgan Davis	pro-sol.....	(619)670-5379
OS/2 BBS Systems.....	Pete Norloff	OS2/Shareware BBS.....	(703)385-4325
Washington DC BBS List.....	Mike Focke.....	Interconnect.....	(703)425-2505
Genealogy Related BBS.....	Richard A. Pence	NGS-CIG	(703)528-2612
Desktop Publishing BBS.....	Frank Atlee	Byrds Nest	(703)671-8923
Ontario Area 705.....	Alex Draper	Cottage Country BBS	(705)835-6192
Chicago	Colby Jordan/Peter Anvin	Stillwaters	(708)403-2826
Chicago	David Nathan	HURK BBS	(708)801-0823
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS.....	(713)530-8875
Rochester NY AC 716.....	Jerry Masefield.....	Pigeon Coop BBS	(716)262-2612
Central California Area 805.....	Larry Honore	His Board.....	(805)652-1478
Kansas City Area 816/913.....	Roy Timberman.....	Sound Advice.....	(816)436-4516
Dallas/Ft Worth Area 214/817.....	Mark Robbins	Second Sanctum	(817)784-1178
Tulsa Oklahoman Area BBS List	Linda Hargraves.....	Access America.....	(918)747-2542
Raleigh NC Area Code 919	Mike Stroud	Micro Message Svc.	(919)779-6674
U.S.S.R. BBS List	Serge Terekhov.....	Court Crimson King	7-3832-356722

BOARDWATCH MAGAZINE

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EzPC(tm) (414)962-9256 Milwaukee, WI since 04/90. Sysop: Phil Thien. Using TBBS 2.2M[2] with 2 lines on MS-DOS 80386 with 600 MB storage. U.S. Robotics at 14400 bps. No fee. Home of Elektrik Text(tm), a powerful, fast (indexed) keyword searching engine w/ AND/OR/NOT and nesting capabilities. Search 8-MB of USA Today in only seconds! Also the home of the Reseller Forum for computer dealers/VAR's (registration required).

Cul-de-Sac Bar & Grill (508)429-1784
Holliston, Massachusetts since 03/85. Sysop: Pete White. Using TBBS 2.2M with 5 lines on MS-DOS 80286 with 380 MB storage. U.S. Robotics at 14400 bps. \$45 Yearly fee. The home of many TBBS/TDBS software packages, and an almost continuous beta site for many TBBS/TDBS software authors. Like Ben Cunningham's 10,000 message system with full screen editing and quoting, and Jeff Johnson's On-Line Sales Manager.

Easy Access BBS (510)829-7627 San Ramon, California since 05/85. Sysop: Tony Waddell. Using PCBoard 14.5a with 2 lines on MS-DOS 80486 with 350 MB storage. Hayes at 19200 bps. \$4.00 Monthly fee. The latest in MS-DOS and MS-Windows shareware. Access to 130+ Smartnet conferences. Thousands of files to download and messages to read. We offer online chat, batch downloads, easy file and message searches, games doors, Qmail services andand more.

THE EAST END CONNECTION (516)325-1681 Remsenburg, Eastern LI, NY. since 11/91. Sysop: Russell Weisenbacher. Using WildCat 3.01 with 1 line on MS-DOS 8088 with 30 MB storage. Everex at 2400 bps. No fee. Our system caters to the Professional. We provide areas for Teachers; An Insurance/Investment area; Information about The Hamptons; Computer/Electronics Q&A; Automotive Q&A; Hobbies (R/C autos, planes, and trains); Science Fiction stuff; plus lots more!

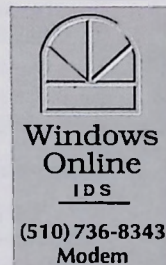
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ACCESS AMERICA (918)747-2542 Tulsa, OK since 03/88. Sysop: Vance Martin. Using TBBS 2.2 with 2 lines on MS-DOS 80386 with 680 MB storage. Zoom & KLH at 2400 bps. \$30 Annually fee. Boardwatch Magazine Online Edition, CONNEX matchmaking & friendship system, Job Market & Resume' database, Online Business Directory, Entertainment calendar, Vacation Guide, EeeeK! Bits magazine, multi-player games, growing file section, and MORE!!!



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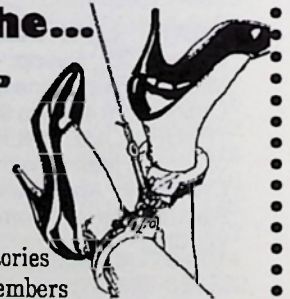
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ADA 9X Project Bulletin Board	(800)232-9925	ADA Programming Language Revisions and News	Chris Anderson/Susan Carlson	Eglin AFB, FL
ADA Information Clearinghouse	(703)614-0215	Information on ADA Programming Language/Military Specs	Department of Defense	Washington, D.C.
Advanced Data Services Inc.	(301)695-9116	22 line PCBoard with 5.5 GB of Files	Blaine Brodka	Frederick, MD
American Cybernetics BBS	(602)968-1082	Multi-Edit Product Support BBS	American Cybernetics	Tempe, AZ
ANARC BBS	(913)345-1978	World Radio/TV Handbook - Short Wave Freq Lists/Scheds.	Assoc. of North American Radio Clubs	KS
APCUG - GlobalNet	(408)439-9367	Association of PC User Groups - Over 2000 UG officers	Paul Curtis/APCUG	Scotts Valley, CA
Applied Modeling Research RBBS	(919)541-1325	Environmental Protection Agency Atmospheric Models	William Peterson/EPA	Hurdle Mills, NC
Aquila BBS	(708)820-8344	2 GB 14 Nodes Fidonet/Interlink/Metronet MCA IL/CHI Graphics	Kevin Behrens/Steve Williams/Chris Babb	Aurora, IL
Ashton-Tate Technical Support	(213)324-2188	dBase and Multimate Support - CIS HOST NAME:ATBBS	Ashton-Tate Corporation	Torrance, CA
AST Technical Services BBS	(714)727-4723	Superb support system for AST Computer Products	AST Research Inc.	Irvine, CA
AT&T Support BBS	(908)769-6397	Support for PC 6300 and Other AT&T PC Models	American Telephone/Telegraph PC Division	Plainfield, NJ
ATI Support BBS	(416)756-4591	Support for ATI Modems and Video Cards	ATI Technologies	Scarborough, Ontario
Audiophile Network	(818)988-0452	High-end Audio Components, Music, Video Reviews	Guy Hickey/Quatre Speakers	Van Nuys, CA
Automobile Consumer Services	(513)624-0552	New Car Pricing Reports - Used Car Value Reports	Automobile Consumer Services Inc.	Cincinnati, OH
BBS Press Service	(913)478-9239	Home of INFOMAT Online Weekly PC News Magazine	Alan Bechtold/BBS Press Service	Topeka, KS
Best Friends BBS	(714)828-7093	DLX Multiline Chat/Match Social/Sexual	Ann and Joe Wiseman	Fountain Valley, CA
Big Peach BBS	(404)446-6650	Home of Automeu and Treeview Software	Marshall Magee/Magee Enterprises	Norcross, GA
Big Sky Telegraph	(408)683-7680	Education/Econ Development info to Montana rural Communities	Montanna Rural Education Network	Dillon, MT
Bird Info Network	(303)423-9775	Breeding, Raising, Taming, Exotic Birds	Terry Rune/Dave McClaugage	Arvada, CO
BMUG BBS	(415)849-2684	Support for Macintosh owners - files - conferences.	Berkeley Macintosh Users Group	Berkeley, CA
Boardwatch Magazine Online Info	(303)973-4222	Distribution Service for USA Today/Boardwatch/Closing NYSE	Boardwatch Magazine	Littleton, CO
Book BBS	(215)657-6130	Information on 2000 Computer Books - 800 order number	Business & Computer Book Store	Willow Grove, PA
Borland Download BBS	(408)439-9096	Utilities, Macros, Programming Examples for Borland Products	Borland International/Mike Fitz-Enz	Scotts Valley, CA
Bruce's Bar & Grill	(203)236-3761	24-line Social System - Chat - Games - Downloads	Bruce Lomasky	West Hartford, CT
Bucks Telematics 273/201	(215)493-5242	Local, National, International Message Conferences	Richard Press	Yardley, PA
Canada Remote Systems	(303)863-1350	Citations to 4 Million Texts in Colorado Library System FREE	Colorado Alliance of Research Libraries	Denver, CO
Capital PC User's Group BBS	(416)798-4713	19GB/400000+ files, 2500 Conf's, USENET, IBM/Amiga/Mac &	Jud Newell	Mississauga, Ontario
Castle Tabby 107/412	(301)738-9060	more One of the oldest PC User's Groups - 5500 members	Capital PC Users Group/Roger Fajman	Rockville, MD
Celebration Station	(908)988-0706	Home of TABBY Fidonet Interface Program for Apple Macintosh	Michael E. Connick	Bradley Beach, NJ
Census Bureau Office Automation	(207)374-5161	Adventure Games, Chat, and Sigs - Children	Noel Stookey (Paul of Peter, Paul & Mary)	Blue Hill Falls, Maine
Census Bureau Personnel Division	(301)763-4574	Microcomputers and Office Automation	US Dept. of Commerce/Nevis Frankel	Suitland, MD
Central Point Software	(503)690-6650	Employment Opportunities Within the Census Bureau	US Dept. of Commerce/Nevis Frankel	Suitland, MD
Channel 1	(617)354-8873	PC Tools - Central Point Anti-virus support board	Central Point Software Inc.	Beaverton, OR
Chicago SysLink	(312)622-4442	70-line PCBoard - 8 GB Files - Internet - 1000's msg. confs.	Brian Miller/Tess Heder	Cambridge, MA
chinet	(312)283-0559	Special Interest Areas for Ferret/Pet Owners. TRS80/Aviation	George Matyaszek	Chicago, IL
Classi Computer Fields	(317)359-5199	UNIX System offering Internet Mail	Randy Suess	Chicago, IL
Cleveland Freenet	(216)368-3888	Online System for Classified Advertisements	Steve Edsall/Trader Newspaper	Indianapolis, IN
CocoNet	(319)456-0815	Cleveland City Information/Ohio Governor's Office Online	Case Western University/AT&T/Ohio Bell	Cleveland, OH
Comm-Post, The 104/666	(303)534-6446	CocoNet Support/Demo - Hires Graphics BBS for Unix Systems	Brian and Patricia Dear	La Jolla, CA
Community News Service (CNS)	(719)520-5000	Astronomy - 725+ MB of Files	Brian Bartee	Denver, CO
Community News Service Denver	(303)457-4000	News and Entertainment - 17 Lines Community Focus	Klaus Dimmler	Colorado Springs, CO
Compact Audio Disk Exchange	(415)824-7603	Buy/Sell/Trade Compact Audio Disks Online	Morgan Doyle	Denver, CO
CompuCom Customer Support 3BS	(415)499-7711	Support for CompuComm SpeedModem - 9600 bps - \$279	Wayne Gregori	San Francisco, CA
Computer Garden	(301)546-1508	Treasure Hunting - Metal Detectors - Online Catalog	CompuCom	Sunnyvale, CA
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Computing Canada Online	(416)497-5263	Adjunct to Excellent Canadian PC Newspaper	Ward Christensen	Chicago, IL
Corporate Data Exchange (CDX)	(609)683-4422	PR Newswire/ Business Wire. Logon: hello user.cdx	Computing Canada Newspaper	Willowdale, Ontario
Crosstalk Communications BBS	(404)740-8428	Product Support for Crosstalk for Windows/MK4/XVI	LaFountain Research Corp/Tad LaFountain	Princeton, NJ
CTC IEEE Employment Database	(508)263-3857	Online Database of 20,000 Resumes for Engineering	Digital Communications Associates	Roswell, GA
Cul-de-Sac Bar & Grill	(508)429-1784	Multiline Service - Ham Radio - Humor - TDBS Applications	Career Technologies Corporation	Andover, MA
Dante Project BBS	(603)643-6310	Commentary/Research on Dante's Divinia Comedia	Pete White	Holliston, MA
Dark Side of the Moon	(408)245-7726	Home of WAFFLE, Unix UUCP BBS Software for DOS and UNIX	Dartmouth College	Hanover, NH
			Thomson E. Dell/Darkside International	Mountain View, CA

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East Bay X-Change 372/888	(803)556-7485	Home of XRS Offline Mail Reader	Mike Ratledge	McClintanville, SC
Echo	(212)989-8411	New York Emulation of THE WELL - Unix CAUCUS Conferencing	Stacy Horn/Echo Communications Group	New York, NY
Economic Bulletin Board	(202)377-3870	Economic Statistics/GNP/GDP/Employment, Trade Opportunities	US Department of Commerce	Springfield, VA
Energy Info Admin E-Publications	(202)586-8658	Variety of Petroleum/Coxal/Electricity Energy Statistics	US Department of Energy	Washington, D.C.
eSoft Product Support BBS	(303)699-8222	Home of The Bread Board System (TBBS) BBS Software	Phil Becker/eSoft Inc.	Aurora, CO
Event Horizons	(503)697-5100	64 Line Digitized Graphics Image Library - Adult, GIF files	Jim Maxey	Lake Oswego, OR
Exactus Information Service	(707)524-2548	12,500 Amiga Files - USA Today - Closing NYSE Stocks	David Salas/Robert Cohen	Santa Rosa, CA
Exchange BBS, The	(713)521-2191	Largest BBS in US - 230 Lines - 70,000 files - 7 Gigabytes	James Craig/John Fields	Houston, TX
EXEC-PC	(414)789-4210	Interlink Netmail National Host - Multiline PCBoard System	Bob Mahoney	Elm Grove, WI
Executive Network	(914)667-4567	Support for FALKEN software - 16 lines - doors - chat	Andy Keeves	Mt. Vernon, NY
Eye Contact BBS	(415)255-5972	22 line for FALKEN software - 16 lines - doors - chat	Bill Montgomery	Mill Valley, CA
Falken Support BBS	(703)803-8000	Large Western Canada Galactocomm Info System	Herb Rose	Woodbridge, VA
Farwest BBS	(604)381-3934	NOAA Weather Satellite Images - Russian/Japanese Sat Pics	Ren L'Ecuier	Victoria, BC
FAX/Satellite Services BBS	(619)224-3853	Equipment Authorization Status Advisory Service	Scotty Olson	San Diego, CA
FCC Public Access Link	(301)725-1072	Federal Job Opportunity Lists available online	Federal Communications Commission	Columbia, MD
Federal Job Information Center	(313)226-4423	Info on Federal Libraries - Excerpts Library of Congress News	US Office of Personnel Management	Detroit, MI
FEDLINK ALIX II	(202)707-4888	The First Fido BBS and home of Fido BBS 12s	Federal Library Information Network	Washington, D.C.
Fido Software BBS 1:125/111	(415)863-2739	Fidonet Technical Information for Holland	Tom Jennings	San Francisco, CA
Fido Tech Stand	31-30-735900	Gay Community BBS - AIDS Info - Desktop Publishing - MACs	J.J. van der Maas	Utrecht, Holland
FOG City BBS 125/10	(415)863-9697	Newspaper BBS - Wierdnet Newswire. List of MA Libraries	Bill Essex	San Francisco, CA
Fred the Computer	(508)872-8461	Home of FSUUCP and FSBS - Unix Communications for DOS	Middlesex News-Adam Gaffin	Framingham, MA
FSBBS Prototype System	(805)543-8227	Multiline Entertainment - 8 Lines Games/Chat/News	Chris Ambler, Fubar Systems	San Luis Obispo, CA
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General, The	(619)281-8616	Support for MAGNUM BBS - OS/2 BBS Software - up to 8 lines	Marc Teitler	San Diego, CA
Gilmore Systems BBS	(818)706-9805	Gay and Lesbian Information Bureau - 11 Lines - 9600 bps	Chuck Gilmore	Thousand Oaks, CA
GLIB	(703)578-4542	Ecological and Peace Issues - Disarmament/Toxics/Wildlife	Community Educational Svcs. Foundation	Arlington, VA
Greenpeace Environet	(415)512-9108	Customer Support Line for Hayes Customers. V-series/Ultra	Dick Dillman/Greenpeace	Norcross, GA
Hayes Advanced Systems Support	(800)874-2937	Community Online Service - Free Internet E-Mail Boxes	Hayes Microcomputer Products	Peoria, IL
Heartland Free-net	(309)674-1100	Reptile and Amphibian Studies - Poison Snakes/Toads/Fish	Peoria County Board/Bradley University	Philadelphia, PA
Hepnet/Satronics TBBS	(215)698-1905	MIS Windows and OS/2 Files our specialty	Lee Winsor	New Hartford, CT
HH Info-Net BBS	(203)246-3747	Harvard On-Line Library Information System - 7E1 VT100	Harvard University	Cambridge, MA
HOLLIS	(617)495-9500	Telephone Sales Trade Magazine Online Service	IBM National Support Center	Atlanta, GA
IBM National Support Center BBS	(404)835-5300	Excellent list of Atlanta BBS systems online	Harry Newton Publications	New York, NY
Inbound/Outbound/Teleconnect	(212)989-4675	8 line Galactocomm System - Many good text publications	Rodney Aloia	Marietta, GA
Index Systems	(404)924-8414	Demo EBS for InfoHost BBS Software - Multiline - Database	Daniel Diachun	Lexington, KY
Infinity World	(606)271-6556	Space Database - Online Store - Chat	A-Comm Electronics Inc.	Hasbrouck Heights, NJ
InfoHost Demo BBS	(201)288-7792	Support for Intel PC Products - Inboard 386/AboveBoard 286	John Williams	Johnson City, TN
Infotlink for Upper East Tenn.	(615)434-2551	32 Lines - 100 Directories - Good Shareware Catalog 3.2 GB	Intel Corporation PC EO Division	Hillsborough, OR
Intel PCEO Support BBS	(503)645-6275	Online Investment/Stock Market Information/Tech Analysis	Mike Sussell	New York, NY
Invention Factory	(212)431-1194	Navy Judge Advocate General's Information Network	Don Shepherdson	Bellevue, WA
Investor's Online Data	(206)285-5359	Online Hardware Order - Catalog - 1.1 GB Files - Quizzes	US Dept. of Navy / Chris Buechler	Arlington, VA
JAG-NET	(703)325-0748	7E1 Pilots Weather Service - NWS Data and Maps	JDR Microdevices	San Jose, CA
JDR Microdevices BBS	(408)559-0253	OPTIK, TEXT2COM, CBOOT, very good shareware utilities	Jeppeson Data Plan Inc.	Los Gatos, CA
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JOBBS	(404)992-8937	400 MB Books, Writers Area - TRS 80 Support	Keith P. Graham	Nyack, NY
Keith Graham Shareware Support	(914)623-0039	Home of GENESIS BBS Software - Multinode LANable.	Federal Reserve Bank of Minneapolis	Minneapolis, MN
KIMBERELY BBS	(612)340-2489	Support for LANtastic local area network	Jim and Karen Burt	Boulder, CO
King's Market BBS 104/115	(303)665-6091	Home of GENESIS BBS Software - Multinode LANable.	Artisoft Inc.	Tucson, AZ
LANtastic BBS	(602)293-8065	Home of UFGATE - Software to connect PCs to UUCP/Usenet	Carter Downer	Hannibal, NY
Late Night BBS	(315)592-7300	Support for Leading Edge Computer Owners	Tim Pozar	San Francisco, CA
Late Night Software 125/555	(415)695-0759	Legal Issues/Forms - Law BBS List	Leading Edge Computer	Westborough, MA
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NATIONAL LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - JANUARY 1992

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
MAC-LINK	(514)935-4257	Macintosh Oriented Support BBS - 6 Lines - Informa/BIX	Mark Smith	Montreal, Quebec
Macrolot Bulletin Board	(412)846-5312	Support for Second Sight BBS Software for Macintosh	Jeff Dripps/FreeSoft Company	Beaver Falls, PA
MacInternational	(803)798-3755	Largest MAC BBS on East Coast	Ralph Yount	Columbia, SC
Magpie BBS	(212)420-0527	Support/Demo System for Magpie BBS/Conferencing Software	Steve Manes	New York, NY
MaxiHost Support BBS	(209)836-2402	MaxiHost: BBS - small, very easy to run BBS	Don Mankin	San Ramon, CA
McAfee Associates BBS	(408)988-4004	Computer Virus Information - VIRUSCAN and CLEANUP Programs	John McAfee/CVIA	Santa Clara, CA
METRO Online Entertainment	(212)831-9280	32 line DLX with City Guide/Ski Database - Matchmaker - Chat	Bruce Kamm/Metro Online Services	New York City, NY
Micro Foundry, The	(415)598-0398	2.2 GB Downloads - Your Online Software Source - Boardwatch	Thomas Nelson/Clockwork Software	San Jose, CA
Micro Message Service	(919)779-6674	USA Today/Boxoffice Magazine - Large Download Area	Mike Stroud	Raleigh, NC
Micro Tech BBS	(314)334-6359	Support for OSIRIS Multiline BBS Software - IRIS Mail	Micro Tech	Cape Girardeau, MO
Microlink B	(303)972-9800	Over 2.5 GB of IBM Software - Multiline - USA Today News	Girard Westerberg	Littleton, CO
Microsim Technical Support BBS	(206)649-9836	Support for Popular R-Base Relational Data Base System	Microrim Corporation	Redmond, WA
Microsystems Software Inc.	(508)875-8009	HandiWare Software for Handicapped - CodeRunner C Utilities	MSI - Reed Lewis	Framingham, MA
Minnesota Spacenet	(612)920-5566	Minnesota Space Frontier Society - NASA News	Ben Husset	Minneapolis, MN
MOG-UR's EMS	(813)366-1238	4 Lines - 4 Networks CD-ROMS - 1.5 GB Hub Services HSTV.32	Tom Timpidis	Westerville, OH
N8EMR Ham BBS	(614)895-2553	login:hbs HAM Radio/AMSAT Unix System - Satellite/Packet	Gary Sanders	Nepean, Ontario
NAPLPS Graphics BBS	(613)727-5272	Zenith Computer Support - List of Federal Micro User Groups	MicroStar Corp.	NAS Norfolk, VA
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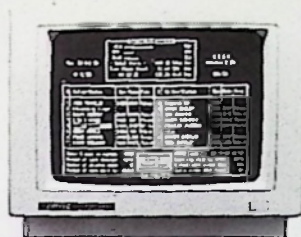
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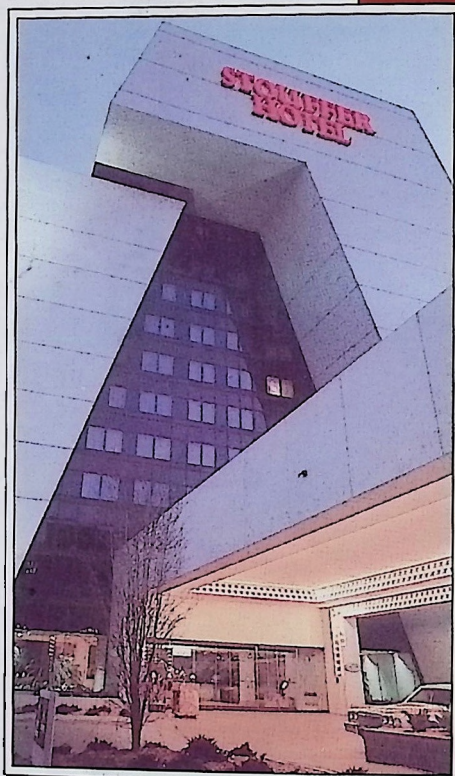
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